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THESIS

A MODEL OF CAREER ORIENTATION
FOR
MILITARY NURSE CORPS OFFICERS

by

Susan B. Lensing

Thesis Advisor: George W. Thomas

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER

2. GOVT ACCESSION NO.

3. RECIPIENT'S CATALOG NUMBER

4. TITLE (and Subtitle)

A Model of Career Orientation for Military Nurse Corps Officers

5. TYPE OF REPORT & PERIOD COVERED

Master's Thesis
December, 1984

6. PERFORMING ORG. REPORT NUMBER

7. AUTHOR(s)

Susan B. Lensing

8. CONTRACT OR GRANT NUMBER(s)

9. PERFORMING ORGANIZATION NAME AND ADDRESS

Naval Postgraduate School
Monterey, California 93943

10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS

11. CONTROLLING OFFICE NAME AND ADDRESS

Naval Postgraduate School
Monterey, California 93943

12. REPORT DATE

December, 1984

13. NUMBER OF PAGES

108

14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)

15. SECURITY CLASS. (of this report)

15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release, distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Nurse, Military Nurse, Turnover, Officer Retention

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

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S/N 0102-LF-014-6601

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A Model of Career Orientation for Military Nurse Corps Officers

by

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Submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
December 1984

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ABSTRACT

The purpose of this thesis was to investigate whether the perception of alternative job factors affected the career orientation of military Nurse Corps officers in both their initial and non-initial period of service obligation. The sample was selected from the 1978 Department of Defense Survey of Officer and Enlisted Personnel conducted by the Rand Corporation. Nurses were divided into career orientation groups according to years of service intended. The groups were homogeneous with respect to demographic and current job characteristics. Stepwise discriminant analyses were performed to select the set of alternative job attributes which best discriminated between each career orientation group. Discriminant analyses were also performed on each individual alternative job attribute to determine the single best discriminator. Knowledge of the perception of alternative job factors will provide manpower planners with useful information to evaluate the effect of personnel policies on the stay/leave decision of junior Nurse Corps officers.

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I. INTRODUCTORY MATERIAL

A. INTRODUCTION

A shortage of nurses has existed almost continuously since World War II. Two exceptions have occurred: from 1968 to 1971 and the current period beginning in late 1980. Events related to economic downturns, such as a decrease in nonessential hospitalizations, are thought to have contributed to the resolution of the nursing shortage during both of the above periods [Ref. 1]. However, even during times when the shortages of nurses abated, the turnover of nursing personnel continued.

Turnover among hospital nursing staff has been a complex and distressing problem confronting administrators of a majority of hospitals in the United States. The National Association of Nurse Recruiters has estimated that annual turnover rates for the nursing profession in 1979 and 1980 were 35 percent and 30 percent, respectively [Ref. 2]. The Navy Medical Department has also experienced turnover, but not in the same proportions as the civilian sector. A comparison of the differences for the two years cited above show an 11.0 percent turnover in 1979, and a 9.9 percent turnover in 1980 of Navy Nurse Corps Officers.[1]

From an organizational perspective turnover costs can be broken down into three major components. These include separation costs, replacement costs, and training costs. When total costs are viewed from this framework, the individual decision to leave an organization has been estimated to exceed $10,000 [Ref. 2]. An organization with a staff of

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[1]Source: CDR M.S.Stratton, Nurse Corps Career Plans Officer, MEDCOM-5414. February, 1984.

200 nurses may lose $600,000 a year if their turnover rate is within the industry norm (30 percent x 200 nurses x $10,000 per nurse). This cost, however, is an organizational cost and does not account for the costs that the individual employee incurs once the decision to leave the organization has been enacted. Mobley has characterized the negative individual consequences of employee turnover as including loss of seniority and related privileges, loss of nonvested benefits, disruption of family and social support systems, inflation related costs (e.g., mortgage costs), transition related stress, disruption of spouse's career path, and career path regression. Furthermore, an organizational cost estimate does not include factors which may adversely affect the "stayers", such as a decrease in their productivity resulting from the increased workload during the replacement period, a decreased cohesion, decreased commitment, and disruption of social and communication patterns. [Ref. 3]

Nursing turnover in the health care industry affects the quantity and quality of the product rendered, patient care. It is difficult to give high quality patient care in a setting of high staff turnover. Nursing is thought to be both an art and a science. In the art of nursing, the development of a degree of intuition and judgement occurs only after time and familiarity with a job. Frequent turnover prolongs the process necessary to learn the art and science of the profession [Ref. 4]. It is difficult to give quality patient care if job inexperience interferes with a nurse's ability to perform the art as well as the science of the job. Furthermore, nursing turnover may adversely affect the individuals in need of quality health care services by increasing their days of hospitalization or increasing their visits to outpatient clinics.

The turnover of military nurses represents a significant monetary cost to military medical departments. Military manpower and personnel costs are affected by turnover in several ways. Recruiting, training, and separation costs are all factored into the replacement of a nurse who leaves to take alternative job offers in the civilian community. Indirectly, inadequate or prolonged medical care will increase personnel costs due to the numbers of service members who leave the military citing poor medical care as a contributing factor to their decision to leave. In a military organization these factors may relate to a lack of personnel readiness and consequently mission degradation. Therefore, the ramifications of the turnover behavior affect the individual, the organization, and society.

B. BACKGROUND

The military services have made the assumption that factors which affect the career orientation of military Nurse Corps officers are essentially the same as those which influence the officers of the other military communities. This assumption is evident in military manpower programs and personnel policies which are geared to a generic officer population. Yet, the factors which affect career orientation of a surface warfare officer or a pilot may differ from those which influence the nurse. Nurses are not income maximizers. It is thought that most individuals enter the nursing profession for reasons other than lifetime earnings. Therefore, policies which are geared to increase pecuniary benefits may increase retention of some military communities, but may not have the same effect on nurse retention. In addition, many military retention studies have focused on men, [Ref. 5] [Ref. 6] [Ref. 7], or have ignored gender as a significant variable [Ref. 8]. In a recent review of

civilian and military turnover Stolzenberg and Winkler discussed the importance of gender in turnover studies. In studies of the civilian sector, "Gender...as a significant demographic factor, is held to have a significant impact on the extent to which workers quit in response to their job or personal characteristics" [Ref. 9: p. 37]. However, these authors then ignore this variable in their review of military turnover research. Although females represent less than nine percent of the military population, current plans propose to increase their numbers in the near future [Ref. 10]. Furthermore, most nurses are females. Therefore, studies of the factors which affect retention of a predominantly female group should be of interest to the military's decision makers.

Military nurses have specialized skills and training which were primarily acquired outside the military. The nature of basic nursing education is recognized by civilian health care institutions. Consequently, the skills and training of military nurses are usually readily transferable to civilian nursing jobs. This is not necessarily true for most military officer personnel. A better understanding of the career decision making process for military officers in different occupational groupings would assist manpower planners and policy makers to tailor personnel policies and accommodate for the differences which may exist in the career orientation of the diverse military occupational groups.

Studies of nursing turnover and retention have described several factors which result in an individual's intention to leave a job. Most of these studies have been descriptive in nature and not prescriptive. They describe the demographic characteristics or the job attributes of nurses who leave or who intend to leave an organization. Some of the studies of nursing turnover include registered nurses as well as

para-nursing personnel such as nursing aides, orderlies and licensed practical nurses in the population sample. In addition to the diversity of the samples, some studies also include part time nursing personnel. So, it is with caution that the results of research dealing with civilian nurses can be generalized to the military nurse population. The considerable difference in employment practices between the military and civilian sector also make generalizations from civilian nurse populations potentially inappropriate for military policy implications.

C. PURPOSE

An extensive review of military nursing literature indicates that little research has been done in the area of retention. The purpose of this thesis is to summarize the recent literature on nursing job turnover and then to study the factors which influence the career decision making process of military nurse corps officers. Among the factors selected for analysis are the perceptions that the military nurse has of differences between an alternative civilian job and her current military job. These factors will be used to develop a model of Nurse Corps career orientation which may assist decision makers in evaluating the effect of various personnel policies on nurse corps retention. Additionally, this thesis will study how the military nurses's perceptions of alternative civilian jobs change as the nurse moves through career decision making periods. The data base to be used is the 1978 Department of Defense Survey of Officers and Enlisted Personnel developed by the Rand Corporation as a part of Rand's Manpower, Mobilization, and Readiness Program.

II. REVIEW OF LITERATURE

A. INTRODUCTION AND OVERVIEW

Employee job turnover has been the central issue of extensive research. Muchinsky and Morrow have estimated that since the turn of this century over 1500 publications on the topic of turnover have appeared in the literature [Ref. 11]. Detailed reviews and descriptions of the turnover literature have been written from psychological, sociological, and economic perspectives. The purpose of the present review is to develop a conceptual framework in which the turnover of military nursing personnel may be viewed, and to describe variables which have been found to be important in both nursing and military turnover research. Therefore, to accomplish this purpose the taxonomy of descriptions and definitions of turnover initially will be reviewed followed by a summary of the models developed which may impact on the present study. Studies of nurse retention and turnover are discussed, ending with those studies specific to military nurse corps officers.

B. TURNOVER TAXONOMY

Turnover is measured as the number of persons hired within a period to replace those leaving or dropped from the working force. This meaning connotes a cyclical phenomena which is measured by a numerical ratio.. Price has defined turnover as, "...the degree of individual movement across the membership boundary of a social system" [Ref. 12: p. 4]. Implicit in this definition is the movement of an individual instead of an organization. The word 'movement' is a key to turnover as a dynamic concept, a flow of individuals.

Initially, turnover may be classified into a category of behaviors called 'withdrawal behaviors'. Other forms of withdrawal behaviors include absenteeism and tardiness. Muchinsky and Tuttle have suggested that some forms of withdrawal may act as a substitute for turnover it is difficult for the individual to leave the organization [Ref. 13]. Steers has suggested that these forms of behavior act as an escape from a dissatisfying job [Ref. 14]. In addition to absenteeism and tardiness, withdrawal behavior includes alcoholism, drug abuse, sabotage and work slow downs. Although this thesis considers only the intention to leave or remain in the military, the other forms of substitute behavior should be of special interest to organizations such as the military in which the members incur a very binding contractual constraint. In many cases the individual is unable to leave prior to the end of his contract without incurring severe disciplinary action.

Perhaps the most common disaggregation of turnover is into voluntary and involuntary categories. If the individual 'quits' or 'resigns' the turnover is voluntary. Involuntary turnover is usually initiated by the organization. Forms of involuntary turnover include dismissals, layoffs, and retirements. Price, on the other hand, cautions against using a totally dichotomous view of turnover and gives the examples of a wife who leaves at her husband's insistance. This turnover is really initiated by the marriage partner. Involuntary turnover has been defined as, "...a residual concept that refers to all movement not initiated by the member" [Ref. 12: p. 9]. Seybolt et al. have reported that although some turnover is unavoidable, 64 percent to 75 percent of nursing personnel turnover is associated with voluntary causes [Ref. 15].

The assumption is frequently made that turnover is 'bad', i.e. it is dysfunctional for the organization.

Dysfunctional turnover is described as occurring when an individual leaves but the organization in which he is a member wants him to stay. Functional turnover occurs when the individual wants to leave an organization and his leaving may actually benefit the organization [Ref. 16]. Although functional turnover may also represent a cost to the organization, it is seen in the long run as a positive factor.

Dalton et al. [Ref. 16] propose still another view in the taxonomy of the turnover phenomena by differentiating voluntary turnover into controllable and uncontrollable turnover. If the purpose of the turnover research is to enable the organization to reduce voluntary turnover, the assumption is made that turnover is under the control of the organization. It is also frequently assumed that voluntary turnover is caused by job dissatisfaction. This may not always be the case. Employees leave the organization for reasons other than job dissatisfaction. These authors give the example of individuals who leave to further their education, for family commitments, or for health matters. The question posed is whether or not this type of turnover is under the control of the organization even though it is voluntary in nature. If it is not under organizational control, should data about these voluntary leavers be grouped with data about the voluntary leavers whose termination is caused by job dissatisfaction? According to these researchers, voluntary turnover does not sufficiently define the variable. Therefore, it may be necessary to identify that part of voluntary turnover which is controllable.

On the other hand, it seems that uncontrollable turnover may really be a disguise for controllable turnover. In Dalton's example those individuals who leave for health matters may have developed health problems from job related causes. For example, job stress has been known to lead to

numerous medical problems including high blood pressure, strokes, heart attacks, as well as psychological disorders. Individuals who leave for family commitments may have found that job related conditions, such as unrealistic schedules or unnecessary shift rotations, interfere with family commitments. These are aspects of a job which could be changed. Finally, turnover caused by a need to further one's education may be readily solved by tuition assistance programs or changes in work schedules so that the employer does not have to recruit, hire, and train a new person. Several organizations, including the military, "grow" their personnel to fit the organizations needs for future manpower requirements in an attempt to keep the trained reliable worker who has demonstrated leadership, loyalty, and commitment through past performance.

Turnover has been studied from various units of analysis and from multiple conceptual frameworks. It is considered to be an individual as well as an aggregate phenomena. As an aggregate phenomena, relationships are found between turnover rates and the level of economic activity, occupational group, organization, industry, as well as geographic area [Ref. 12]. Each individual turnover occurrence is tallied for an annual period. The sum of these numbers represents an aggregate phenomena of interest to the military.

A final note on the definition of the turnover concept is concerned with the measurement of turnover. One of the difficulties encountered with evaluating research on turnover or empirical research on retention is to determine what measure of turnover was used in a particular study. There are numerous measures of the turnover phenomena. Price described the four most frequently used turnover rates as: (1) the average lengths of employment for employees who stay and those who leave, (2) accession and separation rates,

(3) stability and instability rates, and (4) survival and wastage rates [Ref. 12]. By using Prices's description of turnover Hoffman summarized the rates in an example which is given in Table 1 [Ref. 17]. The scenario of an hypothesized nursing department that was used for this example is given at the top of Table 1. The separation rate is also called the crude turnover rate by Duxbury and Armstrong [Ref. 18]. This measure depicts volume which is usually the number of interest in considering the magnitude of the turnover problem. However, there are limitations with this rate.

> It has no precise meaning because the same rate will be obtained regardless of the turnover pattern. That is, a 50 percent Crude Turnover Rate would be obtained if half the positions on a unit were vacated once during the year, if a fourth of the positions were vacated twice, an eighth were vacated four times, or innumerable combinations. A high Crude Turnover Rate could be due to a few positions turning over several times, with a stable core staff remaining in other positions. Alternatively, turnover may be spread out over many positions which turn over only once in the year, but leave the unit with no stable core of employees. [Ref. 18: p. 19]

Turnover is also measured in terms of stability or instability rates. The instability rate is a measure of the constancy of staff. The last measure defined is the survival or wastage rate. The wastage rate is a selective index which is concerned specifically with new entrants who leave in an arbitrary time period and according to Hoffman, is potentially the most meaningful measure of turnover.

The principal emphasis of this thesis is on turnover as an individual, voluntary phenomena which is dysfunctional for the organization. The assumption is made that a better understanding of job related factors which contribute to the intention to leave will prove useful in decreasing the costs of turnover for the military. [Ref. 17]

TABLE 1

Summary of Turnover Rates

Scenario: At the beginning of the year, 290 nurses were employed. During the year, 100 nurses left and 120 nurses were hired. By the end of the year, 96 of the new nurses were still employed.

Rate	Definition	Calculation	Turnover
Accession rate	$\frac{\text{Number of new employees}}{\text{Average number of employees}}$	$120 / \frac{290 + 310}{2}$	40.0%
Separation rate	$\frac{\text{Number of employees leaving}}{\text{Average number of employees}}$	$100 / \frac{290 + 310}{2}$	33.3%
Stability rate	$\frac{\text{Number of beginning employees remaining}}{\text{Number of employees at beginning}}$	$\frac{190}{290}$	65.5%
Instability rate	$\frac{\text{Number of beginning employees leaving}}{\text{Number of new employees}}$	$\frac{100}{290}$	34.5%
Survival rate	$\frac{\text{Number of new employees remaining}}{\text{Number of new employees}}$	$\frac{96}{120}$	80.0%
Wastage rate	$\frac{\text{Number of new employees leaving}}{\text{Number of new employees}}$	$\frac{24}{120}$	20.0%

Source: Hoffman, P.B. "Accurate Measurement of Nursing Turnover", p. 38.

C. TURNOVER MODELS

Bluedorn has summarized turnover studies into four identifiable clusters or traditions of research on voluntary turnover [Ref. 19]. These traditions include:

1. Expectancy theory developed by Vroom which utilizes a general cognitive framework to view the individual decision [Ref. 20].
2. Causal models developed by Price of processes leading to voluntary separation using antecedents of job satisfaction [Ref. 12].
3. Causal models of the space between job satisfaction and voluntary separations developed by Mobley et al. [Ref. 21].
4. Research by Porter et al. on antecedents and consequences of a single variable, organization commitment [Ref. 22].

With the exception of expectancy theory which was used as an underlying cognitive framework for many of the models, most models of the turnover process deal with similar exogenous and endogenous variables. The primary differences appear to be in the sequencing of the causal order of variables and in the amount of variance in actual turnover behavior or intention to leave explained by the various antecedents and intervening variables. Expectancy theory states that the attractiveness of an outcome (valence) and the perceived probability that a given behavior will lead to a specified outcome (expectancy) are multiplied together to determine the motivation for a person to act.

Motivation to act = Expectancy X Valence

A second cognitive framework for understanding voluntary turnover has been utilized by Stolzenberg and Winkler [Ref. 9] in describing voluntary turnover from military

service. This framework is based on Thibaut and Kelley's [Ref. 23] model of behavior of individuals who are thought to evaluate their experiences in groups, such as military organizations, according to the costs and benefits involved in maintaining membership in the group. The primary concepts involve a comparison level or CL, and a comparison level for alternatives, CLalt. Comparison level is "...the standard by which the person evaluates the rewards and costs of a given relationship in terms of what he feels he deserves." The comparison level of alternatives is "...the lowest level of outcomes a member will accept in light of alternative opportunities" [Ref. 23 :p. 21-22]. Stolzenberg has summarized the Thibaut-Kelley model as follows,

> The key point about the CL is that it determines whether or not workers are happy with their jobs, but it does not determine whether or not they leave them. The key feature of the CLalt is that it determines whether or not workers leave their jobs, but not whether or not they are happy with them. Accordingly, workers sometimes leave jobs that they like, or stay in jobs that they do not like, depending upon the relative magnitudes of the Cl and CLalt [Ref. 9: p. 8].

According to these authors, previous turnover research has focused on the comparison levels (CL), but future research should focus on identifying which job characteristics workers use when forming their comparison levels of alternatives (Clalt). Decisions to leave an organization will occur only when the attraction of the worker's present job drops below the comparison level for alternative jobs. Therefore, information about specific job characteristics which an employee uses in developing the CLalt may be especially valuable for policy makers.

The second cluster of turnover studies was developed by Price using path analytic techniques which attempted to determine causal sequencing of turnover antecedents. The Price model of turnover was developed and tested on nurses.

The following section of this thesis deals with nurse retention and turnover. Consequently, the Price model will be discussed in greater detail in that section on models of turnover for nurses.

The Mobley et al. model of turnover published in 1979 (henceforth called the 'Mobley model') is a comprehensive and sophisticated conceptual model of the turnover process.[2] The purpose of the model is to identify factors which initiate the individual person's intention to leave an organization. The model attempts to understand variables involved in the complex relationships between job-related and non job-related factors that initiate the individual's decision making process. Arnold and Feldman [Ref. 24] have schematically described the Mobley Model in the following succinct manner:

> Individual values--->affective responses--->intention to search and intention to quit (simultaneously)--->turnover.

In this model, turnover is conceptualized as a process. Inherent in the definition of a process is the concept of an evolution of a series of actions and gradual changes which lead toward a particular result. Mobley has posited that the actions and gradual changes may be behavioral, cognitive, or affective in the turnover process. The key elements necessary to understand the dynamic nature of the turnover process are: change, feedback loops, and interactions overtime.

The Mobley model has several characteristics. The unit of analysis is the individual who has a unique set of perceptions, expectations and values. The conceptual bias

---

[2]Mobley has also published turnover models in 1977 and 1978 which are theoretical precursors to the more complex model which is described in the present thesis.

of the model is in Expectancy theory In addition to the description of the theory previously mentioned, Expectancy theory also suggests that individual behavior is a result of a combination of the individual's motivation, level of ability and role perception. The model is relevant to the present thesis because it takes into account the individual's perceptions and evaluation of alternative jobs. This, too, is based on expectancy theory as it relates to the person's perceived values of the present job and the value of outcomes which may be offered by alternative jobs. Turnover decisions may have both internal (present job satisfaction) and external antecedents (alternative job opportunities). [Ref. 25]

The affect or attraction that an individual has for the present job is defined by present job satisfaction. The expected future attraction of the present job can be measured by the expected utility of a specific alternative. In other words, the individual is attracted to his present job by an affective response with which he evaluates his perceptions of satisfaction with the present job. It is important to note that job satisfaction is present oriented. However, in order to better understand turnover, it is also necessary to define expected future satisfaction of the present job. Mobley illustrates this concept by describing individuals who may be very dissatisfied with a present role but do not quit because of future expectations. In order to acquire a more satisfying job in the future, it is necessary to be in the present job as a prerequisite. Therefore, a person who is dissatisfied with a present job will not quit, even though job satisfaction indices will show a negative correlation with turnover. Expected future satisfaction of the present job may also involve expected transfer possibilities, as well as changes in the current job in terms of content, supervision, and policies. [Ref. 25]

The individual intentions are the integrative construct of the model. Intention to quit is the immediate precursor to turnover and it has been shown to be the strongest predictor of the actual turnover behavior [Ref. 3] [Ref. 7]. Impulsive behavior and time between measurement of intention and the turnover behavior will moderate the strength of the relationship between intention and actual quitting. The model also considers other variables which may moderate the intention to search and the intention to quit. The first is the centrality of work values and interests, as well as other life values and non-work consequences of quitting or staying. The second moderating variable to the intention behavior is the individual's need for immediate versus delayed gratification.

Baysinger and Mobley have identified the method of integration of the variables in the turnover model in the following formula:

S x E.U.(P) x E.U.(A)--->intentions--->turnover

where S = job satisfaction, E.U.(P) = expected utility of the present role, and E.U.(A) = expected utility of the alternatives [Ref. 25]. A schematic representation of the Mobley model is given in Figure 2.1 [Ref. 21].

Bluedorn synthesized three turnover models in the development of his model of turnover [Ref. 26]. Included in this integrated model were the causal relationships developed by Price between individual determinants of job satisfaction, the environmental opportunity structure and intent to leave. The concept of organizational commitment was used as an antecedent to turnover and was determined by job satisfaction. The third major tenet of the integrated model was the linkage between job satisfaction, job search and intent to quit or stay developed in the first of the Mobley turnover

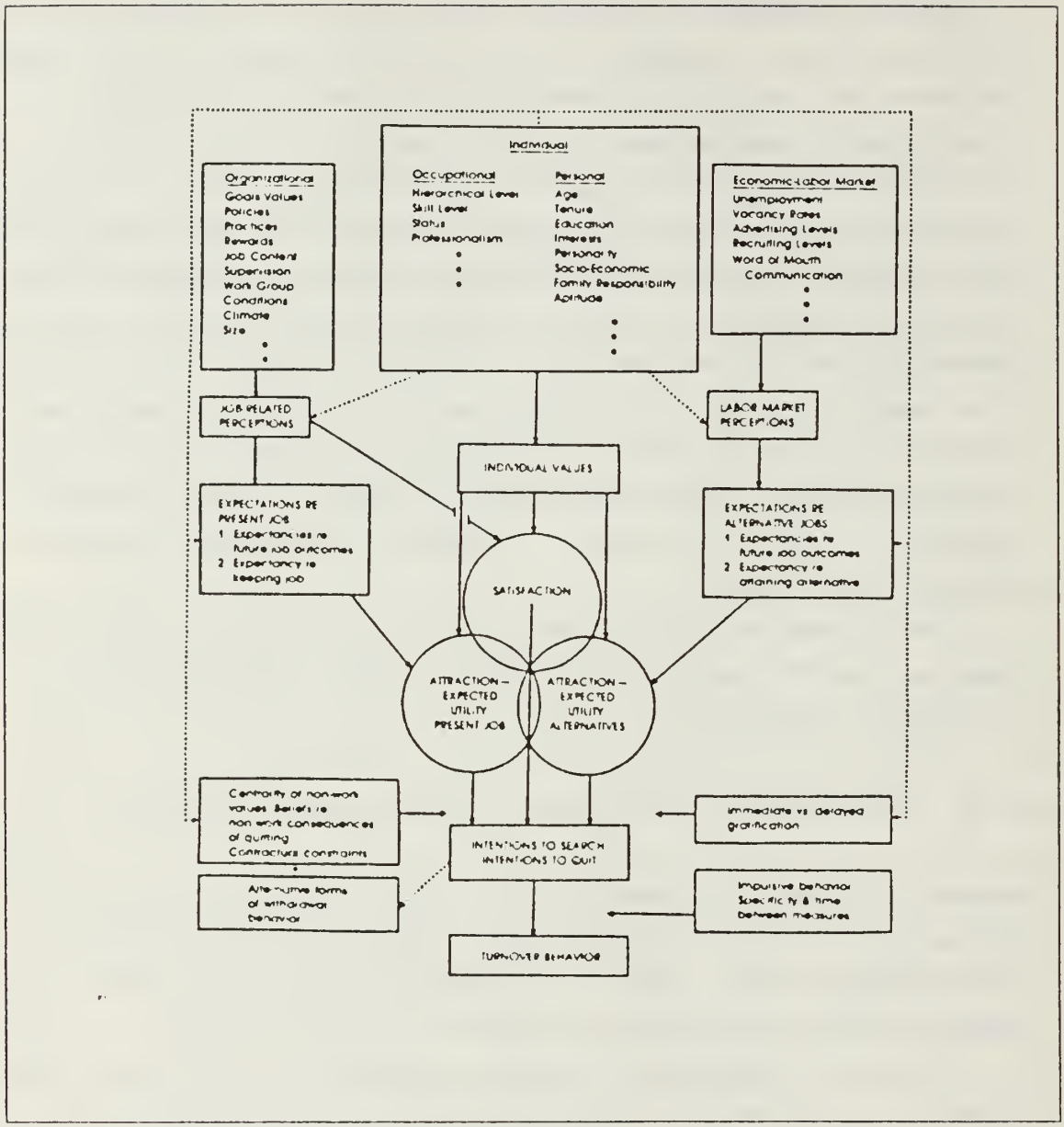

Figure 2.1 Mobley's Model of the Turnover Process.

models published in 1977. Bluedorn's model is depicted in Figure 2.2.

Research using path analysis of the endogenous and exogenous variables showed that job search was related to an individual's perceptions of past and present environmental

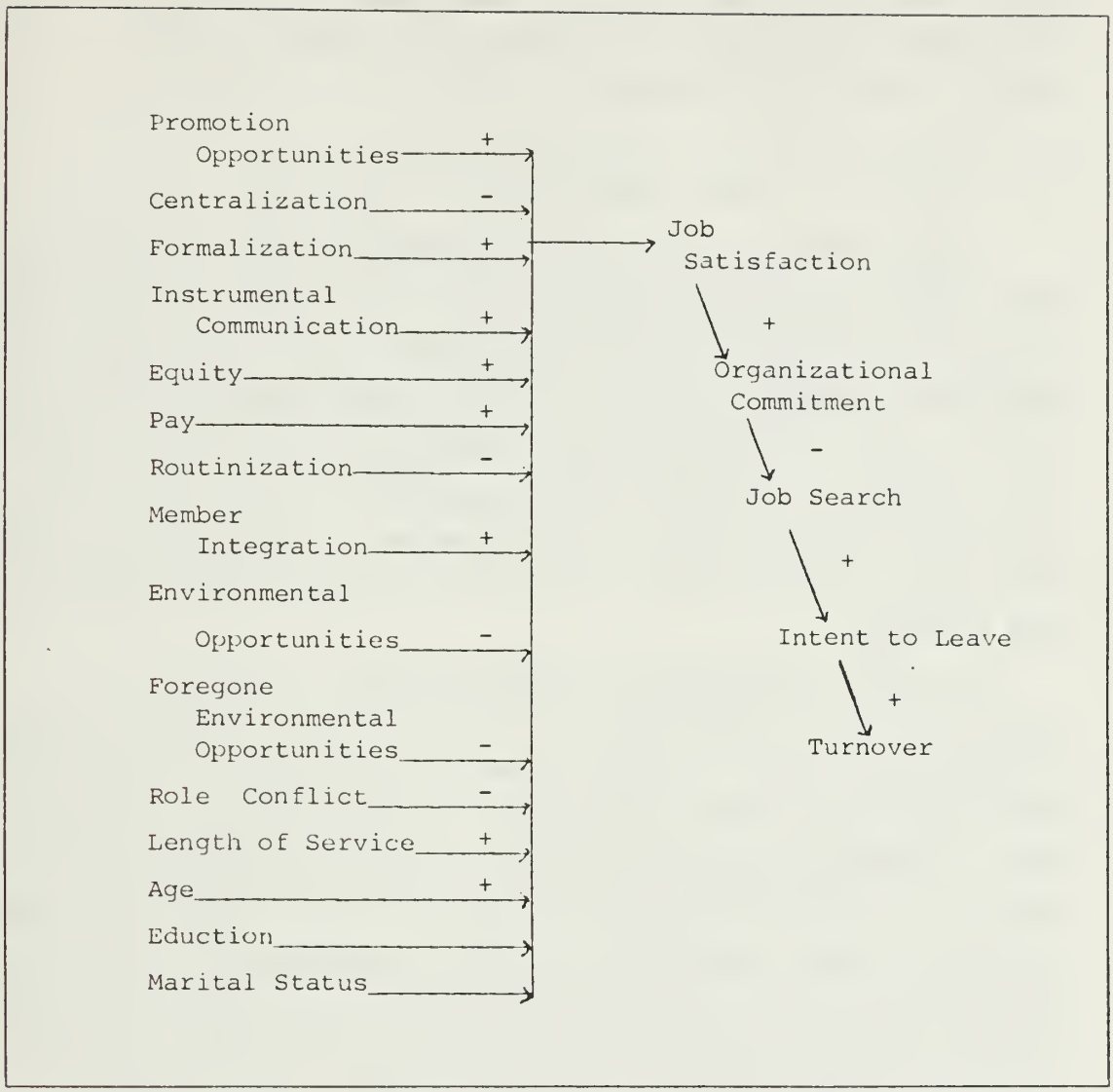

Figure 2.2 Bluedorn's Model of Turnover.

opportunities rather than intervening between organizational commitment and job satisfaction. Also found were direct paths from exogenous variables such as age, routinization and environmental opportunities to turnover which were not mediated by job satisfaction, organizational commitment or intentions to stay or quit. The routinization variable was defined as the extent to which role performance in an

organization is repetitive. Environmental opportunity was the number and quality of unoccupied roles in an organizations environment.

D. STUDIES OF NURSE RETENTION AND TURNOVER

There have been very few studies of nurse turnover which have used a multivariate approach. The models previously discussed demonstrate the complexity of the turnover phenomena and the need for multivariate analyses to enable a better understanding of the variables which affect the turnover process. The following review of studies on nurse retention and turnover will concentrate primarily on those published studies which utilized a multivariate approach to the problem.

Weisman investigated organizational and non-organizational determinants of turnover in a twelve month longitudinal study of approximately 1000 staff nurses in two university affiliated hospitals. The conceptual framework was a causal sequence in which turnover was the result of individual characteristics, job attributes and work organizations. This framework is given in Figure 2.3. The variables representing personal attributes included marital status, length of employment, number of children, first hospital position, baccalaureate degree, and internal control. Sex was not an attribute in this study because 97 percent of the sample was female. Job attributes included overtime worked, rotating shifts, position level, work load, proportion of baccalaureate nurses on the unit, proportion of nurses on the unit who were in their first position, head nurse responsiveness, communication with head nurse, and adequacy of time for professional development. Exogenous variables used as the dependent and intervening variables were autonomy, job satisfaction, intent to leave, and turnover. [Ref. 27]

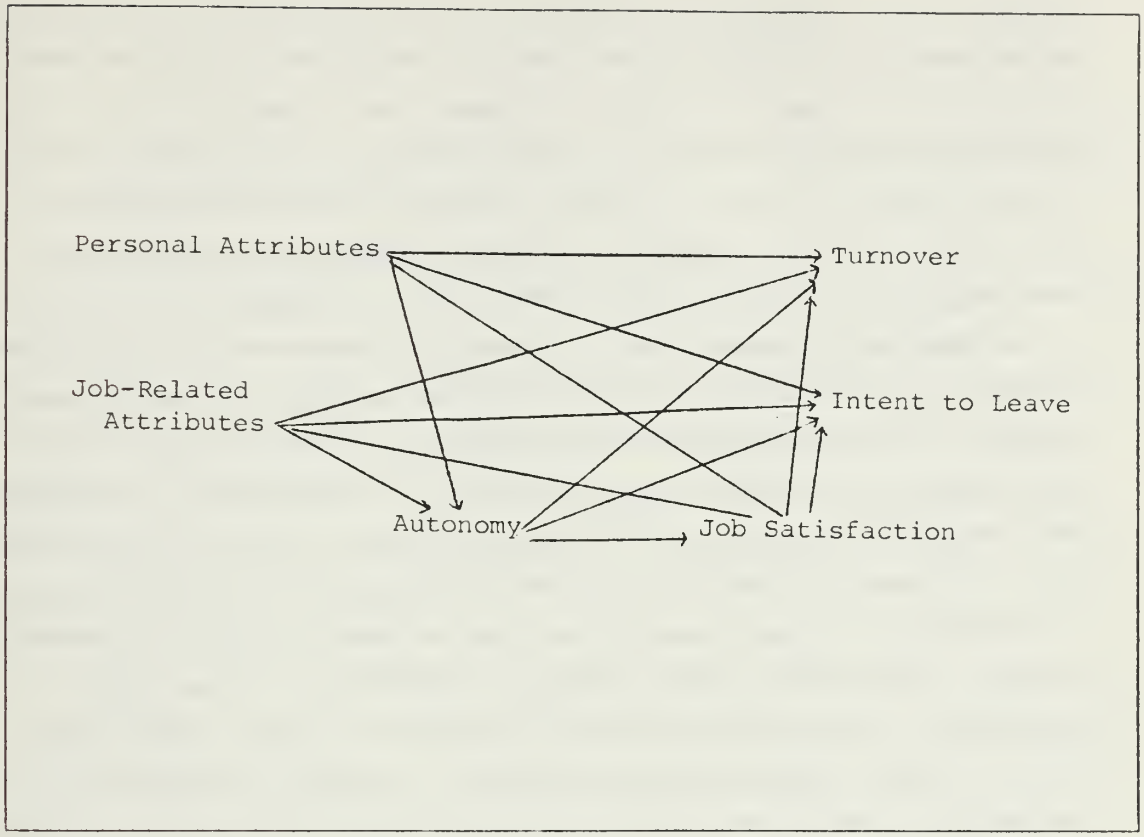

Figure 2.3 Weisman's Theoretical Model.

The framework shown in Figure 2.3 was tested using a series of regression equations. Findings indicated that the sequential decisions which lead to turnover include perceived autonomy, job satisfaction, and intent to leave. The only significant direct effects on turnover were intent to leave and short job tenure. The findings at both hospitals were quite similar indicating that the group of variables had the same predictive power to both settings. Turnover increased the shorter the employment tenure and the greater the number of job hunts. Job satisfaction predicted intent to leave and autonomy predicted job satisfaction. Perception of responsiveness of the head nurse was the strongest predictor of autonomy. The authors concluded the

turnover "...appears to create a vicious cycle, as turnover necessitates hiring new nurses to replace resigners who in turn are at high risk for resignations" [Ref. 27: p. 440]. Although the external environment was not included in the study design, it was noted to be an important factor in turnover "...as available job opportunities affect job hunting and job switching" [Ref. 27: p. 440].

Commitment predictors of nursing personnel's intent to leave was studied by Martin using a sample of registered nurses, licensed practical nurses, and ward secretaries employed in a small rural hospital. Commitment is thought to increase organizational effectiveness by reducing turnover. However, the concept of commitment can have several definitions. Four facets of the concept include community, career, organizational and job commitment. Community commitment is an attitudinal loyalty to one's geographic area. Career commitment involves a desire to adhere to a series of positions and increased responsibilities in one's occupation. Definitions of organizational commitment abound. Martin defined it as "...the degree of attitudinal dedication to the social institution where one's occupational skills are regularly performed [Ref. 28: p. 1150]. Job commitment is the disposition toward a set of work tasks, given one's current occupation.

Each of the above aspects of the commitment concept were measured by a 44 item questionnaire which also included a measure of intent to leave. Multiple regression techniques were used to determine the importance of each predictor on intentional behavior by determining the decrease in R-square which resulted when a predictor was removed from the equation, and then testing the equation to determine its significance. Results indicated that only job commitment was predictive of intent to leave. Possible implications of this study may be that turnover may be decreased by

developing increased employee job commitment [Ref. 28]. However, the diversity of the sample population and size (110 nursing personnel) detract from any generalizations to a military nurse population or even to an all nurse population in the civilian sector.

In a longitudinal study of approximately 1,110 non-supervisory nurses, Price and Mueller tested a causal model of voluntary nursing turnover. The variables which were identified are listed and defined in Table 2. An interpretation of the pluses and minuses in Figure 2.4 is that increased opportunity would increase turnover and an increase in routinization would decrease job satisfaction. The relationships in the model are depicted in Figure 2.4 Job satisfaction and intent are intervening variables between the determinants and turnover. The only determinant which has a direct effect on turnover was the availability of alternative jobs as defined by the opportunity variable [Ref. 29]. Seven determinants have an indirect effect on turnover through job satisfaction. All variables increase satisfaction with the exception of routinization. Three variables have a direct effect on intent to stay. Professionalism and generalized training variables relate to the strength of an individual's dedication to role standards and socialization and have a negative effect on intent to stay. Intent to stay is included as one indicator of commitment. Kinship responsibilities increase intent to stay. Data was collected using a questionnnaire which requested information on the factors listed in Table 2. Additionally, information was collected on age, length of service, and amount of time worked (whether full time or part time). The number of nurses who had voluntarily left 15 months after completing the questionnaire was determined.

TABLE 2

Price's Determinants and Intervening Variables

Variable	Definition
Opportunity	The availability of alternative jobs in the organization's environment.
Routinization	The degree to which a job is repetitive.
Participation	The degree of power that an individual exercises concerning the job.
Instrumental Communication	The degree to which information about the job is transmitted by an organization to its members.
Integration	The degree to which an individual has close friends among organizational members.
Pay	The amount of money, or equivalents, distributed in return for service.
Distributive Justice	The degree to which rewards and punishments are related to the amount of input into the organization.
Promotional Opportunity	The amount of potential movement from lower to higher strata within an organization.
Professionalism	The degree of dedication to occupational standards of performance.
General Training	The degree to which the occupational socialization of an individual results in the ability to increase the productivity of different organizations.
Kinship Responsibility	The degree of an individual's obligations to relatives in the community in which an employer is located.

TABLE 2

Price's Determinants and Intervening Variables(con't)

Job satisfaction	The degree to which individuals like their jobs
Intent to stay	The estimated likelihood of continued membership in an organization.

Source: Price and Mueller "A Causal Model of Turnover for Nurses" pp. 545-546.

Among the 80 percent of the original sample who had returned the questionnaire the turnover rate was 19 percent. The turnover rate for the entire sample, including those who did not return the survey was 28 percent [Ref. 29].

Statistical methods used to test the model included a series of multiple regression analyses and path analysis. Results indicated that seven variables had a statistically significant influence on job satisfaction ($p<0.001$) The variables with the strongest influence were routinization, instrumental communication, promotional opportunity, and participation. Amount of time worked and age had weak but statistically significant effects. The total variance explained by job satisfaction was 26 percent.

Job satisfaction, amount of training, and kinship responsibility had strong effects on the intervening variable, intent to stay. However, the strongest effect was from the nurse's length of service which was not part of the causal model, but was used as a predictor of turnover. It is interesting to note that pay had a significant effect on intent to stay, but had little influence on job satisfaction. The availability of alternative jobs also had a negative effect on intent to stay. The major influence

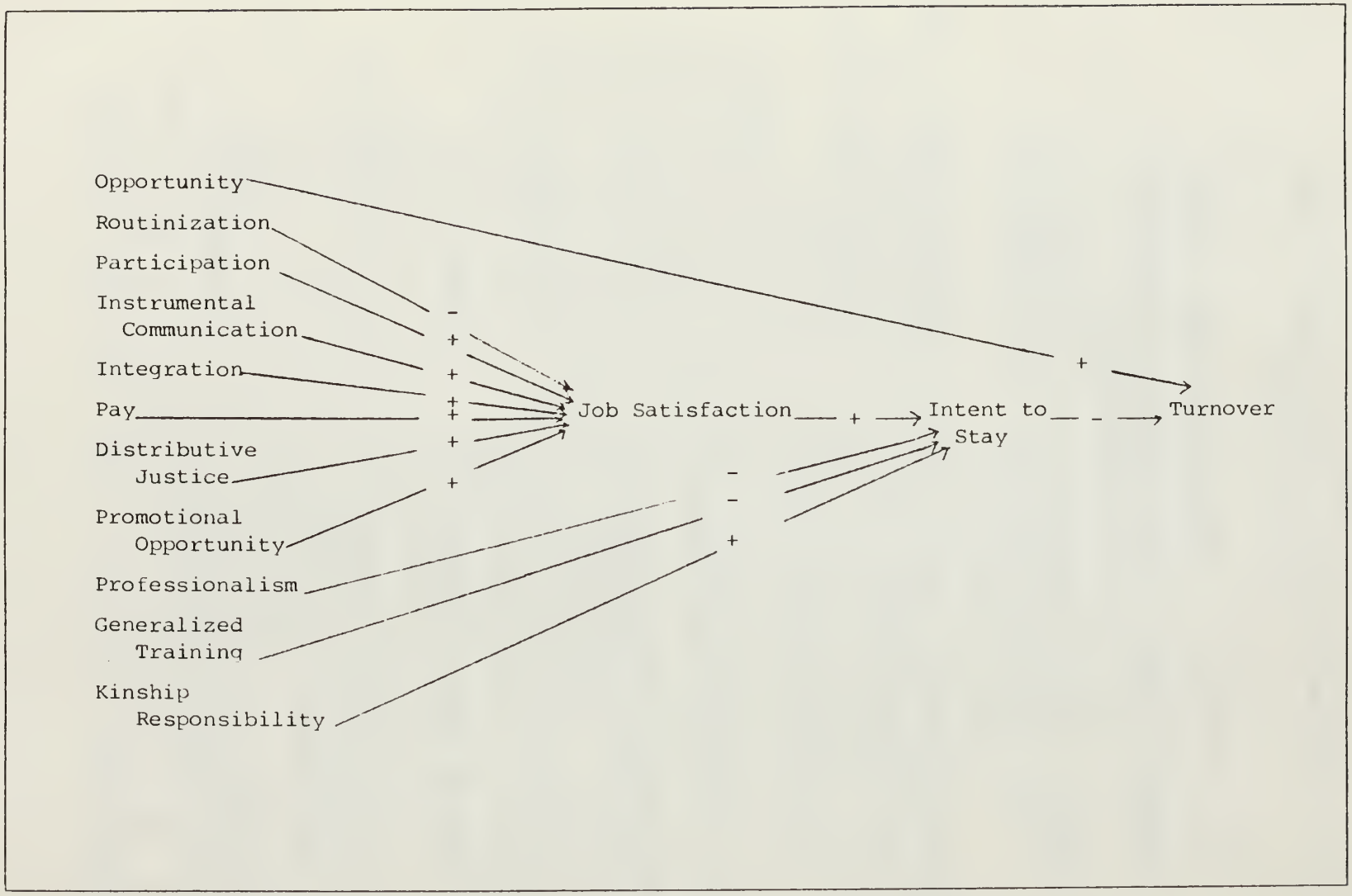

Figure 2.4 Price and Mueller's Model of Turnover.

on actual turnover was from the intention to stay. Opportunity was also found to have a significant effect on the turnover behavior, but job satisfaction had no significant net influence. The authors stated that "...those who have the least general training (associate degrees or diplomas) perceive more limited opportunity, and intend to stay are the most likely not to leave the hospital" [Ref. 29: p. 556]. The authors also concluded that both economic and non-economic variables were important in explaining turnover and cautioned against narrow disciplinary research of turnover.

E. STUDIES OF MILITARY NURSE RETENTION AND TURNOVER

The first published study of military nurse job satisfaction and intention to remain in the military was performed in 1971. Several factors related to retention or loss of novice Army nurses were studied based on the March-Simon inducement-contribution balance theory of organizational participation. The novice Army nurse was defined as a former member of the Army Student Nurse Program whose first nursing employment was with the Army. The sample consisted of nurses who had no more than four months remaining in their initial two-year or three-year Army commitment at the time of the data collection. The purpose of the study was to determine the relationship between expressed intention to remain in or to leave the military service and the expressed satisfaction with selected working and living experiences, controlling for importance, alternatives, and perceived ease of movement from the organization [Ref. 30].

Approximately 180 novice nurses completed a questionnaire which contained biographical data, an index which determined ease of movement, and a 30 item index of working

and living experience data which was rated on three separate scales, importance to the individual, satisfaction with the Army and opportunity for satisfaction in a civilian job as compared to the Army. The respondents were grouped into two dicotomous groups according to their intention to stay or leave after completing their obligation. A second dicotomous groups consisted of the respondents perception of the degree of difficulty in moving from the Army into a civilian life and in finding the type of job he would like. Results of the research indicated that stayers were more satisfied than leavers ($p<.001$). Groups who perceived more difficulty in moving from the Army to civilian life were also more satisfied. However, the lack of significant interaction between satisfaction and perceived mobility indicated that the difference in satisfaction did not depend on the perceived ease of movement. Additionally, significant differences were found between stayers and leavers in perceived opportunity for satisfaction with alternatives. The leavers perceived greater opportunity for satisfaction in civilian life than did the stayers. Significant differences in intention to remain were also found between the percentage of unmarried and married women: unmarried women intended to remain more frequently than married women. There was no difference found between stayers and leavers in their perceptions of the importance of 90 percent of the items in the working and living experiences questionnaire. [Ref. 30]

Another study of satisfaction and retention of military nurses was conducted in 1977. Army Nurse clinicians and practitioners were compared to a control group of Army staff nurses. The clinician/practitioner is nurse with specialized education, usually at the graduate level who works in an extended nursing role. Practitioners are frequently seen in the physician-extender role of providing medical

management including diagnosis and treatment of the patient. The purpose of the study was to identify factors which this specialized group of nurses perceived to affect their job satisfaction and retention. The Army had previously estimated that attrition among Army educated clinicians/practitioners was about 50 percent for those in Intensive Care specialties down to 11 percent for those in Ambulatory Care. It was felt that this represented a significant loss of a valuable resource. Unfortunately, the study did not give the comparable attrition rate for the general duty staff nurse control group [Ref. 31].

The study utilized a questionnaire which gathered demographic data and and job specific information from a 50 item Likert type scale which measured both the importance and current satisfaction of each job item. The job items included such factors as perceptions about authority, competence of supervisors, communication, work environment, equipment, recognition, vacations and prestige. Only one question asked about the perceptions of availability of comparable jobs in the civilian community. The respondents were also asked to rank order a list of ten job satisfaction factors in order of subjective importance and were also told to weight each factor.

Results indicated that the clinician/practitioners were more satisfied and better utilized than staff nurses, and felt that choice jobs were more plentiful in the civilian sector than in the military ($p<0.0110$). There was no difference in intention to remain between the two groups. Reasons given for remaining on active duty included the availability of education, medical, retirement and pay benefits as compared to the civilian community, job security (financial), travel, and job satisfaction. Both groups identified similar reasons for leaving: jobs based on rank not education, pushed into administration, lack of

utilization of skills, frequent moves, lack of job security (not being promoted or moving from job to job). A major problem identified with the research methodology was the inability to determine which of the individuals were in their first or subsequent obligation, or if they had any obligation remaining. [Ref. 31].

Feris and Peters addressed the retention of Navy health care providers, including nurses, from a model of organizational commitment utilizing discriminant analysis to determine the most successful predictors of retention and motivation. The primary emphasis of the study was on the construct of organizational commitment and the role it played in retention. The individual's length of service was found to be the most consistent predictor of intention to remain. "...the decision to continue in the service is strongly influenced by the time already served to the extent of overriding a lower job satisfaction and lowered career enhancement of the present job" [Ref. 32: p. 83]. Length of service did not discriminate between groups with active or passive commitment, only between those who intended to stay or to leave the organization.

Command organization and occupatioanal commitment were also found to be powerful discriminating variables among the sixteen variables studies. Command organization was defined as the degree of perceived consideration for human resources and included items such as time and workload factors, organization of work, and welfare and morale. Occupational commitment included the needs for technical competence, managing, and job security. However, the most interesting finding was that the passive commitment group reported only neutral to moderate job satisfaction despite the decision to remain in the Navy [Ref. 32]. This finding, published in 1976, supports several of the later models of turnover in which other variables intervene between the organizational climate or job satisfaction and the intent to remain.

The model developed in this thesis is based on Expectancy Theory and the Thibault-Kelley framework of comparison levels of alternative job opportunities. The decision which an individual nurse makes is based on complex cognitive processes, some of which have been described by the intricacies of the most recent models of turnover. The model proposed for military nurses suggests that factors which influence a nurse's career orientation include perceptions that the nurse has of differences between an alternative civilian job and her current military job. Furthermore, factors important in the decision making process change according to the career position of the nurse. In other words, the relative importance of alternative job characteristics change during a career. The decision to stay in the military for a nurse in her initial obligation is driven by different factors than is the decision made by a nurse to remain for a 20 year career when the nurse is not in an initial service obligation.

III. METHODOLOGY

A. RESEARCH OBJECTIVES

The major objective of this study was to develop and test a model which could be used to explain career orientation of military Nurse Corps officers. The emphasis of the model was on job characteristics that nurses use to determine the differences which exist between military nursing and alternative civilian nursing job perceptions. Major questions asked included:

1. How does comparison between the perceived civilian job environment and the military system influence career orientation of Nurse Corps officers?
2. Does the perception of civilian job comparisons change at various career decision points?
3. Which alternative job comparisons are the most influential determinants of career orientation?

B. DATA BASE

1. Survey Sample

Several years after the all volunteer military was initiated, Rand Corporation was tasked to study strategies and solutions to defense manpower problems. Part of the study undertook the development of a Department of Defense-wide data base which was to be used for research into the military members evaluation of personnel policies such as reenlistment bonuses, career patterns, rotational policies, and utilization of women to name just a few. The data included specific information about behavior,

experiences, attitudes, preferences and intentions of military personnel. To obtain this data for the active duty military population the 1978 DOD Survey of Officers and Enlisted Personnel was developed and administered in 1979 to a world-wide sample of about 93,000 military personnel. Four forms of the questionnaire were used. Forms One and Two were administered to enlisted personnel. Forms Three and Four were administered to Officers. Forms Two and Four dealt with various aspects of the quality of military life and attitudes. Forms One and Three were called the "economic and labor force" questionnaires and included information on family incomes, reenlistment decision-making aspects of military compensation and, most important for the current thesis, perceptions of alternative civilian jobs compared to the respondent's current military job [Ref. 33]. The objectives of the present study were best met by an analysis of Form Three, the economic and labor market variants for officers. The ten subject areas covered by Form Three are noted in Table 3.

Survey sample stratification for officers was by service, sex and paygrade. The numbers of questionnaires yielded and returned for the services which have commissioned Nurse Corps officers are noted in Table 4 The medical needs of the Marine Corps are met by the Navy Medical Department. Although nurses may be assigned to the Fleet Marine Force, they are still considered part of the Navy Medical Department. The Marine Corps has no nurses and was eliminated from further analysis in this thesis.

Raw response rates for both Navy and Air Force were 74.1 percent which was greater than the Army's raw response rate at 63.3 percent. Unfortunately, for the Army, the number of usable questionnaires was only 80.2 percent of the desired number for the sample design. Therefore, the Navy and Air Force nurses may be oversampled. Branch of service

TABLE 3

Overview of Major Subject Areas of Form 3

Military Background--service, paygrade, and duty station or post.

Service Plans--expected years of service and expected paygrade upon leaving the service.

Military Work Experience--occupation and work schedule.

Individual Characteristics--age at entry and present, marital status at entry and at present, education, numbers and ages of dependents.

Current Housing Arrangement--housing type, home ownership, rent, mortgage, and satisfaction with housing.

Military Compensation and Benefits--baseic pay, BAQ, BAS, special pay and allowances, average monthly military exchange and commissary expenditures, valuation of benefits.

Military Retirement System--preferences regarding several alternatives to the present system.

Civilian Labor Force Experience--current civilian work information on member and spouse.

Civilian Job Search--job offers and potential civilian earnings.

Measures of Overall Satisfaction with military life.

Source:
1978 DOD Survey of Officers and Enlisted Users Manual

will be an important variable to control for in the analysis in this thesis.

2. Selection of Nurse Corp Officer Sample

The initial stratification of the respondents to Form Three of the DoD data base was for all officers who had indicated that their primary occupational group was nursing.

TABLE 4

Form 3 Response Rates

	Service		
	Army	Navy	Air Force
Fielded	3,165	3,806	3,388
Returned	2,005	2,822	2,511
Fielded %	63.3	74.1	74.1
Required	2,500	2,500	2,500
Required %	80.2	112.9	100.4

The total number of nurses which responded to Form three of the survey was 660. The greatest number of respondents were in the Air Force and the least were in the Army. The number of nurses for each of the services is given in Table 5.

TABLE 5

Nurse Corps Officers by Service

	Frequency	Percent of Total
Army	169	25.6
Navy	227	34.4
Air Force	264	40.0
TOTAL	660	100.0

Appendix A contains a complete listing of officer classification codes and the nursing subspecialty codes for the three military services utilized in this study to select the Nurse Corps sample. As noted in Appendix A, it was not possible to determine subspecialties of Navy Nurse Corps officers. Although each nurse has a subspecialty, the numerical coding for each subspecialty was not common knowledge at the time the survey was administered.

From the initial nurse sample those nurses with seven years or less of commissioned service were selected for further analysis. Officers who had completed more than

seven years of service at the time of the survey indicated a strong tendency toward a twenty to thirty year career. Approximately 260 Nurse Corps officers remained in the sample under study after controlling for greater than seven years of commissioned service.

In order to identify differences in career orientation among nurses who have made the first significant decision to stay in the military, the sample was divided into two categories. These categories consisted of those nurses in their initial obligation and all other nurses. Although individuals of both groups may have obligated years of service remaining, the nurses in the group of non-initial obligors have already made one career decision by deciding to remain in the military after completion of their initial three year service obligation.

The first category included those nurses three years or less of service and who were currently serving in an initial service obligation period. The second category included those nurses with greater than four but less than or equal to seven years of service who were not serving in an initial obligation. It is possible to incur several years of obligated service after an initial service contract is signed. This usually happens when an officer returns to school to obtain military funded advanced education or graduate degrees.

The nurses in each category were then subgrouped according to their career intentions. The first career intention subgroup included nurses who intended to leave as soon as their obligation was completed. The second subgroup was composed of nurses who intended to stay in the military after their obligation was completed but not for a full twenty year career. The third subgroup consisted of those officers who planned to make the military a career. Their intentions indicated that they planned to stay twenty or more years in the military.

Data manipulation of the Rand data base was performed on the IBM 3033 computer at the Naval Postgraduate School. The Statistical Package for the Social Sciences Program (SPSS-X) was used for all statistical analyses of the data [Ref. 34]. Preliminary frequencies, crosstabulations, condescriptive analysis, T-tests, and one way analysis of variance procedures were utilized on the remaining Nurse Corps officer sample. Descriptive statistics were completed for the two major categories of nurses (initial and non-initial obligors) and homogeneity of the three groups within each category was assessed.

C. VARIABLE SELECTION

The survey as administered contained responses for 159 separate questions. Because many of these variables were not relevant to the present study on perceptions of alternative jobs comparisons, they were eliminated from further analysis. The review of turnover literature, as well as intuitive reasoning led to the selection of an initial group of demographic and job related variables. These variables would be utilized to determine if significant differences existed in the demographic characteristics or current job conditions among the three subgroups of Group I, nurses in their initial obligation, and among the three subgroups of Group II, those nurses not in an intital service obligation. The variables selected for inclusion in this initial subgroup analysis are included in Table 6 The actual survey questions answered by the respondents are found in Appendix B.

Initial analy is of the sample included testing the three subgroups of each of the major tenure groups for significant differences in demographic and present job characteristics. Tests included a comparison of the means

TABLE 6

Variables Used to Determine Homogeneity of Subgroups

Demographic

Age
Current Education
Sex
Current Marital Status
Race

Military

Branch of Service
Paygrade
Length of Active Duty
Length of Obligated Service

Perceived Civilian Opportunities

Civilian Job Offers
Probability of Finding a Civilian Job
Probability of Using Skills in a Civilian Job

Time Spent in Job Activities

Hours Worked During Daytime
Hours Worked Other Than Daytime
Total Hours Worked
Hours on Duty Status

Kinship Responsibilities

Dependents (excluding spouse)
Number of Weeks Spouse Employed in 1978
Total Family Income

between the subgroups using T-tests and an analysis of variance for differences among the means of all three subgroups for each tenure grouping of nurses.

After determining whether or not the subgroups represented homogeneous subsamples, analyses were conducted on the perceptions of alternative civilian jobs as compared to the current military job utilizing the variables in Table 7. The purpose of the preliminary analyses was to determine if there were apparent differences in perceptions of civilian job conditions between the subgroups of nurses for both the Initial Obligors (Group I) and the Non-Initial Obligors

(Group II). Differences were determined by T-Tests and an Analysis of Variance. These results are given in Appendix E. There appears to be significant differences between and within the subgroups, so further analyses were conducted in an attempt to determine which civilian job factor (or set of factors) was most important for each of the subgroupings of military nurses.

TABLE 7

Comparison of Civilian and Military Job Conditions

Variable
Immediate Supervisors
Having A Say
Retirement Benefits
Medical Benefits
Interesting and Challenging Work
Wages or Salaries
Chance for Promotion
Training Opportunities
People I Work With
Work Schedule and Hours
Job Security
Equipment
Job Location

D. STATISTICAL METHODS

Discriminant analysis procedures were used to statistically identify the factors that separate the groupings of nurses for both the Initial and Non-Initial Obligors. The

alternative job comparison variables listed in Table 7 were used to measure characteristics on which the groupings were expected to differ. The discriminant procedure forms a linear combination of the variables which were selected for analysis in a stepwise method. These functions are formed in such a way as to maximize the separation of the groups. The stepwise method sequentially selected the "next best" discriminator to reduce the set of variables while still including the amount of information in the full set of variables. [Ref. 34]

The major use of discriminant analysis in this thesis was to classify nurses by identifying the likely group membership of the nurse when the only information known is the values on the discriminating variables. By classifying the cases used to derive the discriminant functions and comparing predicted group membership with actual group membership, the classification power of the variables can be determined. Individual or sets of variables which perform well in the discriminant function could then be used to improve policy decisions to increase retention of groups of nurses. Significant information obtained from the discriminant analysis can also be for the career counseling of individual nurses.

IV. MULTIVARIATE DISCRIMINANT ANALYSIS

A. DESCRIPTION OF MAJOR GROUPS

As indicated in Chapter III, two tenure categories of nurses were created according to whether or not the nurse was in an initial service obligation. All nurses who had more than seven years of commissioned service were eliminated from the sample because of the strong tendency toward the intention to remain in the military for a twenty year career. Therefore, the remaining sample consisted primarily of junior Nurse Corps officers with seven years or less of commissioned service.

1. Description of Nurses in the Initial Obligor Group (I)

Group I, (i.e., those nurses who were serving in their initial service obligation) consisted of 122 nurses. The mean length of service for this group was 1.7 years and the average age was 25 years. Sixty-seven percent of these nurses had baccalaureate degrees. Over 93 percent were females and 87 percent were caucasian. Thirty percent of the group was married and only 14 percent of the nurses had dependents other than spouses. A detailed description of the demographic characteristics of Group I is found in Appendix C.

2. Description of Nurses in the Non-Initial Obligor Group (II)

Group II consisted of 138 nurses who stated that they were not in an initial service obligation. The average length of service for this group was 5.0 years and the mean age was 28

years. Fifty-four percent of these nurses had a baccalaureate degree. Ninty-seven percent were female and 92 percent were caucasian. Forty-one percent of these nurses were married and 18 percent had dependents other than spouses. A description of Group II is also found in Appendix C.

B. ANALYSIS OF CAREER ORIENTATION

A measure of career orientation a variable was developed using three of the survey questions. The purpose of the variable was to measure how long a nurse planned to remain in the military after the completion of her minimum active duty requirement. The construct was originally developed by Schmidt in his study of junior Navy officers [Ref. 5]. It was also used by Calero to study career orientation of junior Air Force officers [Ref. 6]. A career orientation value greater than zero describes the number of years that a nurse plans to remain after completing an obligation. A career orientation of zero means that an individual would leave as soon as the years of obligated service are completed, or if the service obligation is completed, the individual intends to leave within a year. It usually takes from six months to a year to obtain permission to leave active military duty after submitting a formal written request. If a nurse is serving in a period of obligated service, she may request release from the military service contract only under the most extreme conditions.

Using the Career Orientation variable, the two years of service groups of nurses were then divided into combinations of groupings using the following criteria:

Leavers: Nurses who had a career orientation of zero.

Short-Term Stayers: Nurses whose career orientation was greater than zero but less than 20 indicating that although they intended to remain in the military past their obligated service, they did not plan to remain for a 20 year career.

Careerists: nurses who had a career orientation greater than zero and who intended to remain in the military for twenty years or more.

Stayers: A combined group of both short term stayers and careerists.

Non-Careerists: A combined group of Leavers and Short-Term Stayers.

The numbers of nurses in each of these groups are identified in Table 8. The purpose of this grouping is to attempt to determine which of the survey variables that compare aspects of military nursing to civilian nursing are important for decisions leading to three groupings of nurses: Short-Term Stayers/Careerists, Stayers/Leavers, and Careerists/ Non-Careerists. The total sample size decreased to 249 after eliminating those individuals who failed to respond to one of the three survey questions used to determine career orientation.

TABLE 8

Career Orientation of Nurses

	Initial Obligors (Group I)	Non-Initial Obligors (Group II)
Leavers	57	34
Stayers		
Short-Term	21	40
Careerists	38	59
TOTAL	116	133

Differences in demographic and present job characteristics between each of these groupings for the Initial Obligor Group were ascertained using T-tests. To determine differences among all three groupings a one way analysis of variance was performed. Results of both analyses indicated that the only significant difference in demographic characterists for the Initial Obligors was gender. The difference was significant in all of the groupings for this tenure group. The complete list of variables tested and the resulting T-values for the T-tests and the F-values for the analysis of variance are given in Appendix D.

T-tests and a one way analysis of variance were also carried out for the differences in means of the demographic and the current job characteristics of nurses in the same groupings for the Non-Initial Obligors (Group II). Results for Non-Initial Obligors indicated that the only significant demographic variable was age. The difference was significant for the Non-Career/Career and the Short-Term Stayer/Career groupings. Complete results of these statistical tests can be found in Appendix D. From these analyses it was determined that the groupings were similar in demographic characteristics for 17 out of the 18 demographic and job characteristics selected for analysis for both of the major groups, Initial Obligors and Non-Initial Obligors. There was a significant difference in gender for the groupings of the Initial Obligor group and a significant difference in age for the Non-Initial groups. These results indicated that it may be necessary to account for gender and/or age in further analyses.

It is important to note that both tenure groups were homogeneous with respect to all but one of the 18 variables tested. Being able to control for the majority of the demographic and current job characteristics permits concentration on the influence of specific alternative job

comparisons on the turnover decision. If differences occur in perceptions of these military versus civilian job comparisons for the various groupings of nurses in each of the major tenure groups, the differences can then be used to obtain an initial understanding of what job factors are important in forming the comparison level of alternatives, the CLalt described by the Thibaut-Kelley framework and depicted in the Mobley turnover model.

C. ALTERNATIVE JOB COMPARISONS AND ORGANIZATIONAL COMMITMENT

Several models of turnover behavior have indicated that perceived job factors external to the individual's organization are relevant to the turnover decision. Mobley's 1979 turnover model [Ref. 21] determined that these labor market perceptions influenced a composite variable, intention to search/intention to quit, through a cognitive evaluation of perceptions and expectations of alternative jobs. However, Price and Mueller [Ref. 29] described their opportunity variable as being a direct influence on turnover, bypassing the intent to stay antecedent behavior. Bluedorn [Ref. 26] also found that environmental opportunities influenced job search which was an antecedent of the intent to leave variable, but environmental opportunities also directly influenced the turnover decision.

The present study tested the effect of alternative job comparisons on organizational commitment with discriminant analysis. Two separate sets of discriminant analyses were undertaken. The purpose of the first set was to isolate a set of alternative job factors according to their ability to explain career orientation intentions. A stepwise discriminant procedure was used to test each variable for inclusion in the discriminant function. Different aspects of

organizational commitment were analyzed by using length of service groups as well as the stay/leave grouping, the career/non-career grouping and the short-term stayer/career grouping.

The second set of discriminant analysis was used to analyze each individual alternative job variable for its ability to correctly classify individuals into a career orientation grouping. These analyses will be described in the Chapter VI.

Initially, the scaling for the alternative job comparison variables presented a problem which necessitated recoding the numerical answer code for these questions. As can be seen in the survey questions reproduced in Appendix B, the original answer scale was a number between 1 and 5. The respondent who thought that a job characteristic was much better in a civilian job marked the answer '1'. The nurse who thought that the job characteristic was a lot worse in a civilian job marked the answer '5'. The problem with this scale is that it is not accurate to say that a '5' which is interpreted as a civilian job being a lot worse means that this characteristic is five times worse than the respondents military job characteristic. It is not possible to tell from the scale each respondent's interpretation of what "a lot worse" means. However, a numerical scale quantifies "a lot worse" response as meaning five times worse. Furthermore, in the discriminant analysis procedure, the scale of '1 to 5' means a '5' is five times 'stronger' than a '1'.

To overcome this problem a new scale was developed for each question in each of the six groupings. The scale was based on a cumulative frequency of responses for each numerical response on the original scale divided by the total number of respondents for the question. The new scale ranged from '0' to '1' giving a cumulative percentage of

individuals responding to each numerical code. By using cumulative percentages a relative response strength could be assigned to each of the numerical '1 to 5' scales.

Prior to the discriminant analysis, a correlation of the alternative job comparison variables for each of the tenure groups, Initial Obligors and Non-Initial Obligors, was performed. The purpose for these correlations was to utilize an informal method of checking for multicollinearity between these variables. Multicollinearity between variables would indicate that the variables are not independent. Lack of independence between variables would decrease the importance of the information obtained from the discriminant analysis [Ref. 35]. The Pearson correlation coefficient for each of the variables is given in Table 9 and Table 10. There were no strong correlations between any of the variables. As noted in Table 10, the only variables which had Pearson correlation coefficients equal to or greater than 0.60 were found in the Non-Initial Obligors (Group II) between Retirement and Medical Benefits ($r = 0.62$) and between Training Opportunities and Interesting Work ($r = 0.60$).

D. RESULTS OF STEPWISE DISCRIMINANT ANALYSIS FOR BEST SET OF VARIABLES

1. Group One: Leaver versus Stayer

Analyses of the stay/leave intentions in Group I indicated that 59 nurses planned to stay at least one year past their initial obligation, and that 57 nurses intended to leave at their first opportunity. The discriminant function which maximizes the separation between these two groupings is given in Table 7. The criterion which controlled

TABLE 9

Pearson Correlation Coefficients for Alternative Job Variables Group I

Initial Obligors (Group I)

Variable	A	B	C	D	E	F	G	H	I	J	K	L
Q93A	--											
Q93B	.51	--										
Q93C	.32	.23	--									
Q93D	.43	.28	.37	--								
Q93E	.48	.38	.24	.30	--							
Q93F	.16	.17	.32	.08	.18	--						
Q93G	.41	.40	.37	.31	.42	.41	--					
Q93H	.45	.43	.43	.43	.58	.31	.56	--				
Q93I	.53	.36	.13	.26	.52	.02	.26	.45	--			
Q93J	.36	.47	.18	.35	.46	.10	.32	.38	.37	--		
Q93K	.39	.31	.19	.39	.34	.07	.18	.19	.34	.35	--	
Q93L	.38	.23	.15	.20	.44	.13	.12	.37	.23	.24	.20	--
Q93M	.28	.16	.28	.31	.32	.16	.26	.37	.24	.20	.12	.28	--

A Interesting Work
B Having A Say
C Retirement Benefits
D Medical Benefits
E Interesting and Challenging Work
F Salary
G Promotion Opportunity
H Training Opportunity
I People I Work With
J Work Schedule
K Job Security
L Equipment
M Location

TABLE 10

Pearson Correlation Coefficients for Alternative Job Variables Group II

Non-Initial Obligors (Group II)

Variable	A	B	C	D	E	F	G	H	I	J	K	L
Q93A	--											
Q93B	.54	--										
Q93C	.21	.38	--									
Q93D	.20	.30	.62	--								
Q93E	.43	.45	.29	.20	--							
Q93F	.28	.32	.50	.35	.28	--						
Q93G	.40	.33	.26	.30	.29	.43	--					
Q93H	.47	.52	.30	.25	.60	.33	.43	--				
Q93I	.42	.33	.14	.07	.39	.21	.19	.44	--			
Q93J	.29	.42	-.01	-.01	.23	.21	.28	.31	.14	--		
Q93K	.31	.34	.31	.26	.26	.44	.38	.34	.26	.28	--	
Q93L	.25	.40	.13	.08	.50	.13	.07	.43	.29	.22	.15	--
Q93M	.34	.35	.27	.28	.33	.35	.13	.34	.36	.18	.33	.34	--

A Interesting Work
B Having A Say
C Retirement Benefits
D Medical Benefits
E Interesting and Challenging Work
F Salary
G Promotion Opportunity
H Training Opportunity
I People I Work With
J Work Schedule
K Job Security
L Equipment
M Location

the exclusion of variables in this function was the minimum residual technique in the stepwise selection method. The stepwise method permits independent variables to be selected for entry into the discriminant analysis based on their discriminating power. A variable is considered for selection only if its partial F ratio is larger that the value of 1. This method reduces the number of variables to those which best discriminate between specified groups. The minimum residual technique minimizes R, the residual variation. It is used when the specified groups are thought to be close together [Ref. 34].

As indicated in Table 11, approximately 25 percent of the variation in this category is explained by the discriminant function (the canonical correlation of 0.505 is squared to obtain this statistic). Furthermore, the 0.745 value of the Wilks' lambda associated with the discriminant function corresponds to a Chi-square of 29.3 with 5 degrees of freedom which is significant at the 0.0001 level.

The variables which remain in this function indicated that the stay/leave decision is primarily associated with five factors. Q93E--perceptions of interesting and challenging work, had the highest standardized canonical discriminant function coefficient (R = 0.85). Also significant in the decision to stay or leave is Q93C--Retirement Benefits (R = 0.79), Q93I--People Worked With (R = 0.78), Q93F--Wages or Salary (R = 0.76), and Q93D--Medical Benefits (R = .75).

The discriminant function constructed in this analysis correctly classifies 70.3 percent of the 104 valid cases in the study. Although there were 116 individuals in the Initial Obligor sample, the SPSS-X discriminant procedure eliminated all cases with missing observations in the variables selected for discriminant analysis. Therefore, in this sample, 12 individuals failed to answer one or more of

TABLE 11

Group One: Discriminant Analysis Results
Leavers vs. Stayers

Group 1: intend to leave after obligated service
Group 2: intend to stay beyond obligated service

Variables Entered	Wilks' Lambda	Standardized Canonical Discriminant Function
Q93E Interesting Work	0.848	0.472
Q93C Retirement Benefits	0.786	0.337
Q93I People Worked With	0.772	0.279
Q93F Wages or Salary	0.758	0.322
Q93D Medical Benefits	0.745	0.301

Canonical correlation = 0.505

For a Wilk's lambda of 0.745, Chi-square (5 df) = 29.3
(Significance 0.0001)

Classification Results

Prior Probabilities: Group 1 49.5% Group 2 50.5%

Actual		Predicted Leaver	Stayer
Leaver	51	32 (62.7%)	19 (37.3%)
Stayer	60	14 (23.3%)	46 (76.7%)

Percent of grouped cases correctly classified = 70.27%

the Q93A to Q93M alternative job comparison questions and were eliminated from the discriminant analysis.

2. Group One: Non-Career versus Career

The second grouping of the Initial Obligor Group was Careerists/Non-Careerists, those who intended to stay for a 20 Year career and those who intended to stay for less than 20 years, respectively. The purpose of this grouping was to determine which factors affected the long term decision to stay. The Initial Obligors were classified into Careerists (N = 38) and Non-Careerists (N = 78). The same stepwise procedure utilizing the minimum residual technique was used to construct the discriminant function. Table 12 summarizes the results of the discriminant analyses.

As indicated in Table 12, 23 percent of the variation in this category is explained by the discriminant function. The Wilks' Lambda of 0.769 correspondes to a Chi-Square of 25.9 with six degrees of freedom significant at the 0.0002 level. Variables found to be significant in classifying the Non-Career/Career of Initial Obligors include Q93G--chances for promotion (R = 0.85), Q93E--interesting and challenging work (R = 0.81), and Q93A--Supervisors (R = 0.79). Also included in this function were Q93L--equipment used on the job (R = 0.79), Q93F--salary or wages (R = 0.78), and finally Q93J--work schedule (R = 0.77). The negative sign for the canonical discriminant function of the equipment variable means that individuals who feel equipment is better in the civilian sector were found to be more likely to remain as careerists. The equipment in the military is usually much older and not as sophisticated with that in the civilian sector and could be a negative factor for nurses who enjoy working with complex technology. This comparison does not seem to be important for nurses who intend to stay for a career. The

TABLE 12

Group One: Discriminant Analysis Results
Non-Careerists vs. Careerists

Group 1: intend to serve less than 20 years

Group 2: intend to serve 20 or more years

Variables Entered	Wilk's Lambda	Standardized Canonical Discriminant Function
Q93G Promotion Chances	0.852	0.405
Q93E Interesting Work	0.810	0.469
Q93A Supervisors	0.798	0.296
Q93L Equipment	0.787	-0.330
Q93F Salary or Wages	0.777	0.244
Q93J Work Schedule	0.769	0.245

Canonical correlation = 0.480

For a Wilk's lambda of 0.769, Chi-square (6 df) = 25.97
(Significance 0.0002)

Classification Results

Prior Probabilities Group 1 66.9% Group 2 33.1%

Actual	Predicted Non-Career	Career
Non-Career 73	61 (83.6%)	12 (16.4%)
Career 42	19 (45.2%)	23 (54.8%)

Percent of grouped cases correctly classified = 73.04%

discriminant function constructed in this analysis correctly classified 73.0 percent of the 104 valid cases in the sample.

3. Group One: Short-Term Stayers versus Careerists

The purpose of the final discriminant analysis performed on the Initial Obligors (Group I) of military nurses was to determine which perceived alternative job comparisons would separate those who intended to remain for a career from those nurses who intended to remain past their obligation, but not for a career. In this analysis the nurses who intended to leave the military as soon as their obligation was completed were deleted from the sample.

Table 13 summarizes the results from this discriminant analysis. The sample size dropped to 59 nurses with the deletion of all who intended to leave at the completion of their inital obligation. Six observations were missing responses to one or more of the question which left 53 nurses in the discriminant analysis. The minimum residual technique criterion was again used in constructing the function. Twenty-seven percent of the variation was explained by the discriminant function. Three variables were included in the stepwise procedure. Q93A--Supervisors was the most influential variable (R = 0.87) followed by Q93G--chance for promotion (R = 0.78), and Q93D--Medical Benefits (R = 0.73). Chance for Promotion has a negative canonical discriminant coefficient which may indicate that if a nurse intends to stay for a career, factors other than promotion are important. The variable was important for those nurses who intend to serve less than 20 years, but beyond an initial service obligation. Promotion is more predictable in the military, but one problem which has been noted in studies of military nurses is that promotion is determined more by years of service, than by performance. This perception may

negatively affect nurses who do not plan to stay for a career. The discriminant function correctly classified 59.3 percent of the valid cases. Furthermore, The Wilks' lambda value of 0.730 for this function correspondes to a Chi-square of 15.6 with 3 degrees of freedom, significant at the 0.0001 level.

4. Group Two: Leavers versus Stayers

The same form of discriminant analyses were also conducted on Group II, nurses in their fourth to seventh year of service who were not in an initial service obligation. The purpose of these analyses was to determine if variables important in the stay/leave decision or in the stay/career decision could be identified for this group of military nurses. The analyses in Section B of this Chapter IV indicated that there were 133 nurses in Group II. The breakdown in career orientation was leavers (N = 38), stayers (N = 41), careerists (N = 59).

Results for the discriminant analyses for the Leave/Stay intention in Group II are summarized in Table 14. Approximately 18 percent of the variation in the group is explained by the discriminant function. The significance of the function is given by the Wilks' Lambda value of 0.831 which is associated with a Chi-square of 22.0 with 3 degrees of freedom. The function is significant at the 0.0001 level.

There were three variables which remained in the function following the stepwise regression procedure. The most influential variable is Q93E--interesting and challenging work (R = 0.88), followed by Q93A--supervisors (R = 0.85), and Q93J--work schedule. The discriminant function constructed correctly classifies 78.1 percent of the valid cases (N = 122) in this grouping.

TABLE 13

Group One: Discriminant Analysis Results
Short-Term Stayers vs. Careerists

Group 1: intend to serve less than 20 years but beyond the years of obligated service

Group 2: intend to serve 20 or more years

Variables Entered	Wilks' Lambda	Standardized Canonical Discriminant Function
Q93A Supervisors	0.867	0.820
Q93G Promotion	0.783	-0.547
Q93D Medical Benefits	0.730	0.703

Canonical correlation = 0.520

For a Wilk's lambda of 0.730, Chi-square (3 df) = 15.6 (Significance 0.0001)

Classification Results

Prior Probabilities: Group 1 33.9% Group 2 66.1%

Actual		Predicted Short-Term Stayer	Careerist
Short-Term Stayer	80	36 (45.0%)	44 (55.0%)
Careerist	38	4 (10.5%)	34 (89.5%)

Percent of grouped cases correctly classified = 59.32%

5. Group Two: Non-Career versus Career

The second grouping of military nurses who were beyond their initial service obligation period consisted of 79 non-careerists and 59 careerists, however, missing responses in these observation decreased the sample size to 122 nurses consisting of 67 non-careerists and 55 careerists. The purpose of this analysis was to establish those variables which were significant to the long term career decision. The same stepwise procedure was used with the minimum residual technique to reduce the number of variables to those which were most important in discriminating between these two groupings of nurses.

The discriminant analysis for this grouping is given in Table 15. The canonical correlation value of 0.434 indicates that approximately 19 percent of the variation in this group is explained by the discriminant function. The 0.812 Wilks' lambda value associated with a Chi-square of 24.5 with 5 degrees of freedom is significant at the 0.0002 level. There were three variables which remained in the final discriminant function. The most influential variable was Q93H--training opportunities (R = 0.89). The remaining variables include Q93E--interesting and challenging work (R = 0.86), and Q93K--job security (R= 0.84). The negative sign for the canaonical discriminant coefficient of Job Security appears to be counter-intuitive based on the results of previous research on military personnel. However, it may be that at the time of this survey there was a significant shortage of nurses in the civilian sector. Because of the shortage, civilian jobs were readily available. Therefore, job security was not an important alternative job factor for nurses who did not plan to make the military a career. The discriminant function correctly classified 67.7 percent of the valid cases.

TABLE 14

Group Two: Discriminant Analysis Results
Leavers vs. Stayers

Group 1: intend to leave after obligated service

Group 2: intend to stay beyond obligated service

Variables Entered	Wilks' Lambda	Standardized Canonical Discriminant Function
Q93E Interesting Work	0.884	0.613
Q93A Supervisors	0.847	0.450
Q93J Work Schedule	0.831	0.360

Canonical correlation = 0.411

For a Wilks' lambda of 0.831, Chi-square (3 df) = 22.0
(Significance 0.0001)

Classification Results

Prior Probabilities: Group 1 23.9% Group 2 76.1%

Actual		Predicted Leave	Predicted Stay
Leave	34	9 (26.5%)	25 (73.5%)
Stay	101	5 (4.9%)	96 (95.1%)

Percent of grouped cases correctly classified = 78.10%

TABLE 15

Group Two: Discriminant Analysis Results
Non-Careerists vs. Careerists

Group 1: intend to serve less than 20 years
Group 2: intend to serve 20 or more years

Variables Entered	Wilk's Lambda	Standardized Canonical Discriminant Function
Q93H Training Opportunity	0.890	0.672
Q93E Interesting Work	0.855	0.563
Q93K Job Security	0.837	-0.379

Canonical correlation = 0.434

For a Wilk's lambda of 0.839, Chi-square (3 df) = 21.10
(Significance 0.0001)

Classification Results

Prior Probabilities: Group 1 54.5% Group 2 45.6%

Actual		Predicted Non-Career	Career
Non-Career	72	48 (66.7%)	24 (33.3%)
Career	63	20 (32.7%)	43 (68.3%)

Percent of grouped cases correctly classified = 67.41%

6. Group Two: Short-Term Stayers versus Careerists

The final discriminant analysis performed on the Non-Initial Obligor group of military nurses was to determine which perceived alternative job comparisons would separate those who intended to remain for a career from those nurses who intended to stay in the military, but not for a 20 year career. The nurses who planned to leave either during the next 11 months or as soon as she completed any remaining obligation were deleted from this final grouping. The deletion of the immediate leavers left a sample size of 100 nurses who planned to stay in the military. Sixteen cases had one or more observations missing, so the sample size decreased to 84 valid cases.

The results for the Short-Term Stayers/Careerists grouping are displayed in Table 5. The minimum residual technique was again used in constructing the discriminant function. The canonical correlation value of 0.372 indicated that 14 percent of the variation in this grouping is explained by the discriminant function. The Wilks' lambda value of 0.861 for this function correspondes to a chi-square of 13.3 with 4 degrees of freedom, significant at the 0.01 level. Four variables remained in the function following the stepwise procedure. The most influential variable was Q93H--training opportunities (R = 0.93) followed by Q93A--job security (R = 0.89). Job security again has a negative canonical discriminant coefficient and, as previously mentioned, may be related to the shortage of nurses which existed in the 1978 civilian job market. Other variables also remaining in the function included Q93L--equipment (R = 0.83), and Q93C--retirement (R = 0.86). The function correctly classified 60.9 percent of the valid cases.

TABLE 16

Group Two: Discriminant Analysis Results
Short-Term Stayers vs. Careerists

Group 1: intend to serve beyond their service obligation but for less than 20 years

Group 2: intend to serve 20 or more years

Variables Entered	Wilks' Lambda	Standardized Canonical Discriminant Function
Q93H Training Opportunity	0.929	0.695
Q93K Job Security	0.893	-0.699
Q93L Equipment	0.826	0.398
Q93C Retirement Benefits	0.861	0.374

Canonical correlation = 0.372

For a Wilks' lambda of 0.861, Chi-square (4 df) = 13.3 (Significance 0.01)

Classification Results

Prior Probabilities: Group 1 40.9% Group 2 59.1%

Actual		Predicted Short-Term Stayers	Careerists
Short-Term Stayers	75	33 (44.0%)	42 (56.0%)
Careerists	58	10 (17.2%)	48 (82.8%)

Percent of grouped cases correctly classified = 60.90%

E. SUMMARY OF STEPWISE DISCRIMINANT RESULTS

The summary of the discriminant results for both the Initial and Non-Inital Obligors is given in Table 17. The summarized results indicate that for the most part, the perceptions of alternative job comparisons are different for the groupings within and between the tenure groups, except for the interesting and challenging work variable, which is included in all but the Short-Term Stayer/Career grouping. According to this finding, a military nurse prefers to have a job which she perceives as interesting and challenging or she may leave the organization. Supervisors, salary, and medical benefits are most important for those nurses in their initial obligation, whereas training opportunities are more important in the career intention decisions of nurses who are not in an initial service obligation. Job security appears to be important for two of the groups of Non-Initial Obligors, but the negative canonical discriminant coefficients conflict with the usual job security findings of military turnover research.

It is interesting to note that the variable representing having a say in one's job does not enter into the discriminant results for any of the groupings for either Inital Obligors or Non-Inital Obligors. Previous studies have included this variable as an antecedent to job satisfaction. Price and Mueller found that job satisfaction was significantly correlated with their 'participation' variable which was defined as the degree of power that an individual was able to exercise concerning a job [Ref. 29]. Autonomy was also found to be an important correlate of job satisfaction by Seybolt [Ref. 15], by Weisman [Ref. 27], and by Munro [Ref. 36] who studied job satisfaction among recent

TABLE 17

Summary of Factors Entering Stepwise Discriminant Analyses

	Initial Obligors			Non-Initial Obligors		
Variable	Stay/ Leave	Non-Career/ Career	Short Term/ Career	Stay/ Leave	Non-Career/ Career	Short Term/ Career
Supervisors		X	X	X		
Having Say						
Retirement	X				X	
Medical	X		X			
Interesting Work	X	X		X	X	
Salary	X	X				
Chance for Promotion		X	X			
Training Opportunity					X	X
People	X					
Work Schedule		X		X		
Job Security					X	X
Equipment		X				X
Job Location						

graduates of schools of nursing. Wesiman suggested that "...perceived autonomy may serve as the focal point for a nurse's evaluation of her job or work organization" [Ref. 27: p. 433]. The results of the discriminant analyses for the best set of alternative job comparisons indicate that either this job factor is not important in the expressed career intentions of military nurses, or the information obtained from the 'Having a Say' variable is contained in one of the variables which was included in the stepwise procedure. A third possibility is that having a say may be an antecedent to career intention which is mediated by a job satisfaction variable which was not part of this study.

Another variable which did not enter any of the discriminant functions was job location. It is not possible to know the exact alternative job which an individual uses as a reference point when comparing the military job with a civilian job. The lack of significance for the job location variable would be intuitively correct if one were comparing a military job with the local civilian job market. Further research would be necessary to determine the nurse's current location and the alternative job location used as a reference point.

V. RELATIVE IMPORTANCE OF INDIVIDUAL FACTORS

A second group of discriminant analyses was performed with the intent to determine which job characteristic was most important for each of the tenure groupings. The previous analyses showed that set of alternative job characteristics which would best discriminate between the individuals of each grouping, but it did not necessarily show which single factor was most influential in the career orientation decision. The second group of discriminant analyses were undertaken because policy makers or nursing personnel managers are usually not in a position to change several job characteristics, but may be able to use information about the job factor which most influence a nurse's career orientation decision. In this discriminant procedure each single variable was used to form a discriminant function. In addition to analyzing each of the 13 alternative job characteristics, age, and gender were also included. The latter demographic variables had been previously noted as being significant in the series of T-tests and analyses of variance which were performed to determine the homogeneity of the two tenure groups, Initial Obligors, and Non-Initial Obligors.

Results of the classification ability of each of the groupings in the Initial Obligor and the Non-Initial Obligor groups are given in the next six tables. In each table the variable's classification results are indicated as well as the Wilks' lambda, canonical correlation and significance level of the function defined by the individual variable.

Results of the discriminant analysis are summarized in Table 24. In this Table only those functions were included

TABLE 18

Leave/Stay Individual Job Item Discriminant Results (I)

Group 1: Intend to leave after obligated service

Group 2: Intend to stay beyond obligated service

Prior Probabilities: Group 1 49.5% Group 2 50.5%

Variable	Classification	Wilks' Lambda	Canonical Corr.	Significance
Supervisors	60.83%	0.931	0.263	0.007
Having Say	63.33%	0.897	0.321	0.001
Retirement	64.96%	0.896	0.325	0.001
Medical Benefits	63.64%	0.898	0.320	0.001
Interesting WorK	61.67%	0.853	0.384	0.001
Salary	58.47%	0.946	0.232	0.018
Chance for Promotion	60.50%	0.889	0.333	0.001
Training Opportunity	60.17%	0.905	0.308	0.002
People	58.82%	0.917	0.288	0.003
Work Schedule	63.33%	0.902	0.313	0.001
Job Security	57.14%	0.953	0.216	0.028
Equipment	55.00%	0.967	0.180	0.069
Job Location	61.67%	0.931	0.263	0.001
Gender	53.72%	0.928	0.267	0.006
Age	55.00%	0.979	0.146	0.140

TABLE 19

Non-Career/Career Individual Job Item Discriminant Results (I)

Group 1: Intend to serve less than 20 years

Group 2: Intend to serve 20 or more years

Prior Probabilities: Group 1 66.9% Group 2 33.1%

Variable	Classification	Wilks' Lambda	Canonical Corr.	Significance
Supervisors	64.17%	0.921	0.280	0.004
Having Say	65.00%	0.931	0.263	0.007
Retirement	63.25%	0.962	0.195	0.048
Medical Benefits	64.46%	0.966	0.183	0.064
Interesting Work	65.83%	0.879	0.348	0.001
Salary	64.41%	0.953	0.217	0.028
Chance for Promotion	70.59%	0.850	0.387	0.001
Training Opportunity	65.25%	0.926	0.272	0.006
People	63.87%	0.966	0.185	0.061
Work Schedule	59.17%	0.914	0.294	0.002
Job Security	63.87%	0.969	0.178	0.074
Equipment*				
Job Location	65.00%	0.968	0.170	0.071
Gender	69.42%	0.908	0.303	0.001
Age	57.50%	0.989	0.104	0.295

*Variable did not qualify for analysis due to insufficient F Level

TABLE 20

Short-Term Stay/Career Individual Job Item Discriminant Results (I)

Group 1: Intend to serve beyond their service obligation but for less than 20 years

Group 2: Intend to serve 20 or more years

Prior Probabilities: Group 1 34.6% Group 2 65.4%

Variable	Classification	Wilks' Lambda	Canonical Corr.	Significance
Supervisors	59.17%	0.870	0.361	0.009
Having Say*				
Retirement*				
Medical*				
Interesting Work	55.00%	0.877	0.351	0.011
Salary*				
Chance for Promotion	57.98%	0.884	0.341	0.014
Training Opportunity*				
People*				
Work Schedule	58.33%	0.932	0.260	0.062
Job Security*				
Equipment*				
Job Location*				
Gender	31.40%	0.971	0.169	0.232
Age	63.33%	0.999	0.004	0.976

*Variable did not qualify for analysis due to insufficient F Level

TABLE 21

Stay/Leave Individual Job Item Discriminant Results (II)

Group 0: Intend to leave after obligated service

Group 1: Intend to stay beyond obligated service

Prior Probabilities: Group 1 23.9% Group 2 76.1%

Variable	Classification	Wilks' Lambda	Canonical Corr.	Significance
Supervisors	73.19%	0.907	0.305	0.001
Having Say	75.37%	0.929	0.266	0.003
Retirement	75.74%	0.976	0.156	0.087
Medical Benefits	76.12%	0.989	0.106	0.246
Interesting Work	74.64%	0.878	0.349	0.001
Salary	75.18%	0.990	0.097	0.288
Chance for Promotion	75.91%	0.971	0.169	0.064
Training Opportunity	75.56%	0.920	0.282	0.001
People	74.45%	0.945	0.235	0.010
Work Schedule	73.72%	0.942	0.241	0.008
Job Security	75.36%	0.991	0.094	0.307
Equipment	75.36%	0.973	0.163	0.074
Job Location	75.36%	0.9466	0.232	0.010
Gender*				
Age	59.85%	0.982	0.135	0.141

*Variable did not qualify for analysis due to insufficient F Level

TABLE 22

Non-Career/Career Individual Job Item Discriminant Results (II)

Group 1: Intend to serve less than 20 years

Group 2: Intend to serve 20 or more years

Prior Probabilities: Group 1 54.6% Group 2 45.4%

Variable	Classification	Wilks' Lambda	Canonical Corr.	Significance
Supervisors	59.42%	0.916	0.289	0.001
Having Say	58.96%	0.928	0.268	0.003
Retirement	60.29%	0.965	0.186	0.041
Medical Benefits	56.72%	0.979	0.146	0.111
Interesting Work	64.49%	0.896	0.322	0.001
Salary*				
Chance for Promotion	58.39%	0.980	0.140	0.126
Training Opportunity	63.70%	0.882	0.343	0.001
People	54.01%	0.960	0.200	0.028
Work Schedule*				
Job Security*				
Equipment	54.35%	0.948	0.227	0.012
Job Location	55.07%	0.951	0.224	0.013
Gender	55.07%	0.988	0.120	0.231
Age	68.61%	0.906	0.306	0.001

*Variable did not qualify for analysis due to insufficient F Level

TABLE 23

Short-Term Stay/Career Individual Job Item Discriminant Results (II)

Group 1: Intend to serve beyond their service obligation but for less than 20 years

Group 2: Intend to serve 20 or more years

Prior Probabilities: Group 1 40.3% Group 2 59.7%

Variable	Classification	Wilks' Lambda	Canonical Corr.	Significance
Supervisors	57.97%	0.973	0.165	0.116
Having Say	61.94%	0.968	0.178	0.090
Retirement	44.85%	0.980	0.141	0.179
Medical Benefits	48.51%	0.986	0.119	0.258
Interesting Work	59.42%	0.957	0.205	0.050
Salary	42.34%	0.976	0.155	0141
Chance for Promotion*				
Training Opportunity	62.96%	0.918	0.286	0.006
People	53.28%	0.985	0.121	0.252
Work Schedule*				
Job Security*				
Equipment	61.59%	0.958	0.206	0.049
Job Location	61.59%	0.975	0.160	0.129
Gender	42.75%	0.977	0.151	0.152
Age	66.42%	0.908	0.304	0.003

*Variable did not qualify for analysis due to insufficient F Level

which had a significance level of less than or equal to 0.01. The relative classification ability of individual alternative job attributes was determined by dividing the percent correctly classified using only that job attribute by the percent correctly classified using the best set of discriminant variables from Chapter IV.

TABLE 24

Relative Classification Ability of Most Important Individual Job Attributes

Initial Obligors	Non-Initial Obligors
Leave / Stay Groups	
Retirement (92%)	Training Opportunity (97%)
Medical Benefits (90%)	Having A Say (96%)
Having a Say (90%)	Job Location (96%)
Work Schedule (90%)	Interesting Job (95%)
	People (95%)
	Work Schedule (94%)
	Supervisors (94%)
Non-career / Career Group	
Promotion Chances (97%)	Age (102%)
Interesting Job (90%)	Interesting Job (96%)
	Training Opportunity (95%)
Short-term Stayers / Career Group	
Supervisors (82%)	Age (110%)
	Training Opporutnity (103%)

1. Initial Obligor Results

In the Initial Obligor group the variable which best classifies the Stay/Leave group was Retirement. Of interest is that retirement is a significant discriminator in this group of young professionals. This result has not been reported in the nursing literaturefor current job attributes. This result may indicate that compared to alternative civilian job attributes, military retirement policy is a signficant factor in the intent to stay decision for a young professional nurse. Promotion opportunity was most important in the Non-Career/Career group. Interesting job and gender also appeared to be important. However, there was a total of only eight males in the Initial Obligor sample, and of these one male was in the Non-Career group and seven were in the Career group. Therefore, the significance of gender as a discriminating variable must be viewed with caution, and for this reason was not included in Table 24. No variable in the Short-Term Stayer/Career grouping accounted for at least 90 percent of the classification ability of the stepwise discriminant results. The highest, supervisors, accounted for only 82 percent.

The inability to discriminate between nurses who intend to stay for a short time versus a career is not surprising. These nurses are in an initial service obligation and in general, they may be able to make decisions about those alternative job characteristics which are important in staying or leaving the military, but they do not have enough job experience and information to determine how long they plan to stay. Furthermore, 50 percent of the Initial Obligors planned to leave the military which left only 59 nurses in the Short-term Stayer/Career sample.

2. Non-Initial Obligor Results

The Leave/Stay grouping of the Non-Initial Obligors (Group II), had numerous variables which could be used to account for the classification correctness of the stepwise results. The most important were Training Opportunities and Having a Say. Age was found to be the most influential characteristic in discriminating Careerists from Non-careerists. In fact, age by itself was able to classify this grouping better than the set of variables selected in the stepwise discriminant method. This finding supports the numerous turnover studies which have found age to be inversely correlated with turnover. The older nurse frequently has longer tenure in a job and is, therefore, less likely to leave. However, in the present analysis, tenure has been controlled for by the narrow length of service window for Non-Obligors. Therefore, this result should be viewed as merely a pure age effect than a combined age/tenure effect.

For the Short-Term Stayer/Career grouping, the individual variables which passed the significance criteria established for Table 24 included Training Opportunity and Age. Both of these criteria can individually discriminate between Short-Term Stayers and Careerists better than the best set of alternative job factors. As previously mentioned, age should be viewed as a separate effect from tenure in this analysis.

VI. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The retention model which the thesis attempted to develop was based on Expectancy Theory and the Thibaut-Kelley framework of comparison level of alternative job opportunities. The factors which were found to be important in classifying groupings of nurses in this selected sample from the 1978 DOD Survey of Officers and Enlisted Personnel differed in the two length of service groups tested. Therefore, this result indicates that perceptions of alternative job comparisons change according to the career position of a military nurse. This thesis also tested the ability of alternative job factors to discriminate between career orientation of relatively homogeneous groupings of the military Nurse Corps officers using a discriminant analysis.

In general, the stepwise discriminant analyses of alternative job comparisons showed the most improvement in classifying ability for stayers and leavers in an initial service obligation. The Having A Say variable had not entered the best set of variables obtained in the stepwise discriminant analysis, but was found to be significant for the Leave/Stay grouping of both tenure groups when the individual analyses were done. This finding indicates that autonomy or 'having a say in what happens to me' is an important determinant in the decision to stay in the military. Unfortunately, the question, as asked in the survey, (see Appendix B) may be interpreted several ways. It is not known from the answers if having a say in a military job setting means having more control over the type of nursing,

the type of unit or ward to which the nurse is assigned, the daily operations of the job, or the rotation work schedule. This variable could also refer to the job as part of a military organization. In comparison to the civilian job or organization, the military does exert more control or strong influence over such aspects of one's lifestyle such as work clothing, time off, number of vacation days (with pay), and ability to quit after giving the usual two week notice if one does not wish to continue working in undesirable conditions.

Training opportunity was important for the career decision of military nurses who were not in an initial service obligation. The finding supports the research by McCloskey in which nurses rated those current job conditions which they felt were most rewarding [Ref. 37]. Weisman included the training opportunity concept in a 'professional time adequacy' variable which measured the nurse's perception of amount of time spent on professional development [Ref. 27: p.435]. The results indicated that the lack of professional adequacy was signifcantly related to the lack of autonomy, and job satisfaction. It was also related to intention to leave, but not directly related to the actual turnover behavior. Although the present research supports the findings of these latter two studies, it must be remembered that the present study is concerned with perceptions of alternative jobs, not current job attributes studied by McCloskey and Weisman.

The 'Interesting and Challenging' job variable appears in two of the Non-Initial Obligor groupings. Further research is needed to determine what is meant by an interesting and challenging job. The military offers nurses opportunities for unusual assignments, and the very fact that the primary objective of military nursing is to be able to support wartime medical needs of casualties would seem to

be a challenge. However, one can not interpret from the survey questionnaire what aspects of the military or alternative civilian job are considered interesting and challenging which makes implications for policy difficult, if not impossible.

The 'Salary or Wage's job comparison was not found to be an important individual job attribute. The variable was not significant, or did not explain at least 90 percent of the relative classification ability of any of the groupings for Initial or Non-Initial Obligors. Salary was found to be significant by Price and Mueller in a regression of current job variables on intent to stay, but was not significant when regressed on either job satisfaction or actual turnover [Ref. 29]. In McCloskey's study salary was not found to be a significant work reward in the turnover decision [Ref. 37]. Weisman did not include a salary variable in her study, stating that nursing literature has consistently found salary to be insignificant in nursing turnover [Ref. 27].

In summary, the relative classification ability of comparisons of individual job attributes is given in Table 24 represents those individual job conditions which most influence the career orientation of military Nurse Corps officers. The job attributes comprised by these variables may be thought of as significant in the process of forming the CLalt, the comparison level of alternatives described by Stolzenberg and Winkler [Ref. 9]. In general, the importance of various job attributes appear to change during the initial years of a military nurse's career. Therefore, policy changes may affect various year of service groups differently.

B. RECOMMENDATIONS

The following recommendations are based on the review of the turnover literature in Chapter II, and the interpretations of the analysis in Chapter IV. Some recommendations are specific to the Navy Nurse Corps community because of this author's previous military nursing experiences.

1. The essential feature of the present study was the ability to test alternative job comparisons after controlling for demographic characteristics and current job factors. Unfortunately, it is not possible to compare the results of this research with other findings because of the lack of alternative job comparisons in the literature. At present, turnover research has studied demographic characteristics or current job factors which influence the decision to remain in or leave an organization. Therefore, the results of the present study need to be repeated not only for military and civilian nurses, but other occupational groups for which demographic and current job factors can be controlled.
2. The present study was limited to a cross-sectional design because of the uinavailability of long term data. In the future, longitudinal studies could be designed which follow individuals of specific occupational groupings for a period of several years from the entry into the military (or an organization) to a point in time when the pull of retirement takes an over riding influence on career decisions. Longitudinal studies of alternative job comparisons would greatly benefit our understanding of turnover and retention as it occurs during different career stages.

3. The technique used to statistically discriminate between individuals in a group could be improved by determining the stepwise method which maximizes classification correctness of the discriminant function. At present, classification correctness is a result of the function's ability to maximize the distance between the two closest groups, by maximizing the smallest F ratio, or minimizing the unexplained variation.
4. The importance of supervisors, i.e., the quality of leadership, needs to be emphasized in the military nursing community. There is no formal method of teaching leadership in the Navy Nurse Corps. It seems to be done "by example". A formalized leadership course may be needed before a Nurse Corps officer is placed in a supervisory position. The Navy Line community sends division officers to the Leadership, Management, Education and Training (LMET) workshops. Ideas from this program and other civilian nursing management and leadership courses could be organized into a formalized requirement for nurses who intend to pursue a career in the Navy.
5. The training opportunity variable was also an important individual job factor in each of the groupings of Non-inital Obligors. It may be necessary to emphasize during individual career counseling sessions and career development memorandums those opportunities which are already available for advanced education funded by the military. Because of the mandatory continuing education requirements of many states for nursing license renewal, more emphasis has been given to increased participation in continuing education courses. However, many of these courses have been developed to meet the needs of the

provider, not the participants. Ideally, the Career Development and Education Offices in the hospitals and medical regions should be able to develop computerized databases with the training needs of each individual nurse within the command. As conferences become available to meet these needs, the individual could be notified of an opportunity to attend, thereby using the limited funding resources in the most effective manner. This would also allow the military to meet those needs which it has as an organization (such as those required by the Joint Commission on Accreditation of Hospitals), as well as meet the training needs and requests of the individual nurse.

6. A final recommendation is to continue the research started in this thesis. Use of a path analytic technique to determine whether the alternative job perceptions influence career intentions directly, or through a mediating 'job satisfaction' variable should prove useful. It is possible that some of the inability to increase classification correctness in a group of nurses who are similar in demographic and current job characteristics is related to the causal sequencing of alternative job perceptions.

APPENDIX A

DESIGNATOR AND SUB-SPECIALTY CODES BY SERVICE

Service	Specialty Code	Description
Army	Military Occupational Specialty (MOS)	
	66A	Nurse Administrator
	66B	Community Health Nurse
	66C	Psychiatric/Mental Health Nurse
	66D	Pediatric Nurse
	66E	Operating Room Nurse
	66F	Nurse Anesthetist
	66G	Obstetric/Gynecologic Nurse
	66H	Medical Surgical Nurse
	66J	Clinical Nurse
Navy	Designator	
	2900	Nurse Corps-Regular Commission
	2905	Nurse Corps-Reserve Commission
Air Force	Air Force Specialty Code (AFSC)	
	9716	Nurse Administrator
	9726	Mental Health Nurse
	9736	Operating Room Nurse
	9746	Nurse Anesthetist
	9756	Clinical Nurse
	9766	Flight Nurse
	9776	Nurse Midwife
	9786	Environmental Health Nurse

APPENDIX B

SELECTED SURVEY QUESTIONS FOR CANDIDATE VARIABLES

Survey Question Number	Question	Scale

3. In what service are you now serving?

Army.....1
Navy.....2
Marine Corps.....3
Air Force.....4

4. What is your present pay grade?

WARRENT GRADES:	W1	W2	W3	W4		
OFFICER GRADES:	O1	O2	O3	O4	O5	O6

6. Officers coming on their first tour of active duty sometimes incur an initial service commitment. Are you presently serving within your INITIAL SERVICE OBLIGATION as a commissioned officer?

Does not apply, I did not have an initial obligation.....7
Yes, I am serving within my INITIAL OBLIGATION.....1
No, I am serving within the FIRST YEAR AFTER MY INITIAL OBLIGATION.....2
No, I am serving MORE THAN ONE YEAR BEYOND MY INITIAL OBLIGATION.....3

7. How many years of obligated service do you have remaining in your present obligation?

Does not apply, I do not have a service obligation.....7
Less than 1 year.....1
At least 1 year but less than 2 years.....2
At least 2 years but less than 3 years.....3
At least 3 years but less than 4 years.....4
At least 4 years but less than 5 years.....5
5 years of more.....6

11. To the nearest year and month, how long have you been on active duty? If you had a bread in service, count current time and time in previous tours. Count time spent at a military academy and prior enlisted service.

YEARS |___|___|
and
MONTHS|___|___|

12. When you finally leave the military, how many total years of service do you expect to have?

YEARS |___|___|

23. Follow the instructions below for you service:

ARMY: Record your CURRENT Primary Specialty and the First Primary Specialty (or MOS) thatyou received when you entered active duty.

NAVY: Record your CURRENT Primary Designator and the FIRST Primary Designator that you received when you entered active duty. Use all four digits of your Designator.

AIR FORCE: Record you CURRENT Primary AFSC and the FIRST Primary AFSC that you received when you entered active duty. Use the first four numbers of your AFSC--DO NOT USE LETTERS.

A. My CURRENT Primary Specialty/Designator/MOS/AFSC is:

First Letter/Number	Second Letter/Number	Third Letter/Number	Fourth Letter/Number
|__|	|__|	|__|	|__|

o I don't know my CURRENT Primary Specialty/Designator/MOS/AFSC

During the last 7 days, how many hours did you spend...

25...working during regular daytime hours--that is, 6:00 a.m. to 6:00 p.m., Monday through Friday/

26...working during hours OTHER THAN regular daytime hours? Please count hours worked during the EVENINGS, AT NIGHT, ON WEEKENDS AND OTHER HOURS NOT INCLUDING 6:00 a.m. to 6:00 p.m., Monday through Friday.

27...Please add the number of hours listed in Q25 and Q26 and enter in the boxes below for Q27.

CHART #1

25. HOURS WORKED DURING REGULAR DAYTIME HOURS	26. HOURS WORKED OTHER THAN REGULAR DAYTIME HOURS	27. TOTAL HOURS WORKED LAST WEEK
|__|__|	|__|__|	|__|__|

30. Are you male or female?

Male.....1
Female.....2

31. How old were you on your last birthday?

AGE AT LAST BIRTHDAY |__|__|

33. What do you consider to be your main racial or ethnic group?

Mark one

Afro-American/Black/Negro.....1
American Indian/Alaskan Native.....2
Hispanic/Puerto Rican/Mexican/Cuban/
Latin/Chicano/Other Spanish.....3
Oriental/Asian/Chinese/Japanese/
Korean/Filipino/Pacific Islander.....4
White/Caucasian.....5
Other.....6
Specify_____

35. What is your marital status now?

Married.....1
Widowed.....2
Divorced.....3
Separated.....4
Single, never married.....5

41. As of TODAY, what is your highest education level? Mark one.

ELEMETARY GRADES: 1st 2nd 3rd 4th 5th 6th 7th 8th

HIGH SCHOOL GRADES: 9th 10th 11th 12th (include GED)

COLLEGE-YEARS OF CREDIT: 1 2 3 4 5 6 7 8 or more

43. As of Today, what is the highest degree or diploma that you hold? Do NOT Include degrees from technical, trade or vocational schools.

Mark One

No Degree or Diploma...00	Bachelor's Degree (BA/BS)....16
GED Certificate.....11	Master's Degree (MA/MS)......17
High School Diploma....12	Doctoral Degree (PhD/MD/LLB).20
Associate/Junior College Degree.....14	Other Degree not listed above.....22

44. How many dependents do you have? Do not include yourself or your spouse.

None 1 2 3 4 5 6 7 8 9 10 or more

81. Altogether in 1978, what was the total amount, before taxes and other deductions, that YOUR SPOUSE earned from a civilian job or high or her own business?

CIVILIAN EARNINGS
OF SPOUSE IN 1978 $ |__|__|, |__|__|__|

84. What was your family's TOTAL INCOME, before taxes and other deductions, from all military and civilian sources for all of last year--1978, Please include civilian earnings that you listed in Q78, Q81, and Q83, your yearly military earnings and any other in 1978.

1978 TOTAL INCOME $ |__|__|, |__|__|__|

89. If you were to leave the service NOW and try to find a civilian job, how likely would you be to find a good civilian job?

	Mark One
No chance.....(0 in 10)...	00
Very slight possibility.....(1 in 10)...	01
Slight possibility.....(2 in 10)...	02
Some possibility.....(3 in 10)...	03
Fair possibility.....(4 in 10)...	04
Fairly good possibility.....(5 in 10)...	05
Good possibility.....(6 in 10)...	06
Probable.....(7 in 10)...	07
Very probable.....(8 in 10)...	08
Almost sure.....(9 in 10)...	09
Certain.....(10 in 10)..	10
Don't know.....	-8

91. Suppose you were to leave the service NOW and try to find a civilian job. How likely would you be to find a civilian job that USED THE SKILLS IN YOUR MILITARY CAREER FIELD?

	Mark One
No chance.....(0 in 10)...	00
Very slight possibility.....(1 in 10)...	01
Slight possibility.....(2 in 10)...	02
Some possibility.....(3 in 10)...	03
Fair possibility.....(4 in 10)...	04
Fairly good possibility.....(5 in 10)...	05
Good possibility.....(6 in 10)...	06
Probable.....(7 in 10)...	07
Very probable.....(8 in 10)...	08
Almost sure.....(9 in 10)...	09
Certain.....(10 in 10)..	10
Don't know.....	-8

93. If you were to leave the service NOW and take a civilian job, how do you think that job would compare with your present military job in regard to the following conditions?

WORK CONDITIONS	CIVILIAN JOB WOULD BE A LOT BETTER	CIVILIAN JOB WOULD BE SLIGHTLY BETTER	ABOUT THE SAME IN A CIVILIAN AND MILITARY JOB	CIVILIAN JOB WOULD BE SLIGHTLY WORSE	CIVILIAN JOB WOULD BE A LOT WORSE
Immediate supervisors	1	2	3	4	5
Having a say in what happens to me	1	2	3	4	5
Retirement benefits	1	2	3	4	5
Medical benefits	1	2	3	4	5
Chance for interesting and challenging work	1	2	3	4	5
Wages or salaries	1	2	3	4	5
Chance for promotion	1	2	3	4	5
Opportunities for training	1	2	3	4	5
People I work with	1	2	3	4	5
Work schedule and hours	1	2	3	4	5
Job Security	1	2	3	4	5
Equipment I use on the job	1	2	3	4	5
Location of the job	1	2	3	4	5

APPENDIX C

DEMOGRAPHIC CHARACTERISTICS OF GROUP I AND GROUP II

GROUP I

	Frequency	Percent
Service		
Army	21	17.2
Navy	51	41.8
Air Force	51	41.0
Pay Grade		
01	14	11.5
02	87	71.3
03	21	17.2
Sex		
Male	8	6.6
Female	114	93.4
Age at Last Birthday		
21-25	51	58.7
26-30	41	33.9
31-35	7	5.7
36-40	1	0.8
Missing	1	0.8
Mean 25.77	Standard Deviation	2.96
Racial-Ethnic Group		
Black	7	5.7
Amer Indian-Alskn	1	0.8
Hispanic	3	2.5
Asian	3	2.5
White	106	89.6
Other	2	1.6
Marital Status-Current		
Married	36	29.5
Widowed	1	0.8
Divorced	7	5.7
Separated	1	0.8
Single-Nvr Married	77	63.1
Degree-Current		
AA	6	4.9
BA-BS	81	66.4
MA-MS	3	2.5
Other (Diploma School of Nursing)	32	26.2

Number of Dependents-Excluding Spouse		
0	105	86.1
1	12	9.8
2	2	1.6
3	2	1.6
5	1	0.8

GROUP II

	Frequency	Percent
Service		
Army	29	21.0
Navy	47	34.1
Air Force	62	44.9
Pay Grade		
02	6	4.3
03	130	94.2
04	1	0.7
Missing	1	0.7
Sex		
Male	4	2.9
Female	134	97.1
Age at Last Birthday		
21-25	23	16.8
26-30	89	64.4
31-35	17	12.3
36-40	7	5.1
41-45	1	0.7
Missing	1	0.7
Mean 28.36	Standard Deviation 3.38	
Racial-Ethnic Group		
Black	7	5.1
Hispanic	1	0.7
Asian	1	0.7
White	127	92.0
Other	2	1.4
Marital Status-Current		
Married	56	40.6
Divorced	11	8.0
Separated	2	1.4
Single-Nvr Married	69	50.0

Degree-Current		
AA	10	7.2
BA-BS	74	53.6
MA-MS	10	7.2
Other (Diploma School of Nursing)	42	30.4
Missing	2	1.4

Number of Dependents-Excluding Spouse		
0	113	81.9
1	17	12.3
2	4	2.9
3	3	2.2
Missing	1	0.7

APPENDIX D

MEANS TESTS OF SELECTED DEMOGRAPHIC AND CURRENT JOB VARIABLES

Initial Obligor Group (I)

Variable	Subgroups: Leave vs Stay T Value	Non-Career vs Career T Value	Short Term vs Career T Value	Career vs Short Term vs Leaver F-value
Service	0.57	-1.02	1.98	1.94
Pay Grade	0.19	-0.50	0.79	0.39
Hours-Day	-0.93	-0.99	-0.46	1.13
Hours-Other	-0.77	-0.37	0.47	1.08
Total Hours	-1.81	-0.76	-0.19	3.41
Hours Duty	0.29	-0.18	-0.53	0.12
Sex	2.96*	3.57*	-1.47	6.89*
Age	-1.73	-1.22	0.06	1.48
Race	-0.90	-0.53	-0.12	0.38
Marital Status	-1.08	-1.37	0.83	0.95
Education	-0.46	1.67	-2.64	4.67
Number Depend. Excl. Spouse	-1.04	-0.91	0.28	0.57
Spouse Civ. Earnings	1.65	0.76	0.73	0.99
Total Family Income	0.48	0.88	-0.77	0.26
Civilian Job Offers	-0.18	-0.39	-0.36	0.08
Finding a Civilian Job	-0.37	0.03	-0.45	0.14
Expected Civilian Earn.	-0.77	1.03	-1.10	0.49
Use Skill on Civilian Job	0.02	0.62	-0.94	0.45

* $P < 0.01$

Non-Initial Obligor Group (II)

Variable	Subgroupings: Leave vs Stay T Value	Non-Career vs Career T Value	Short Term vs Career T Value	Career vs Short Term vs Leaver F-value
Service	-0.68	-0.90	0.65	0.43
Pay Grade	0.25	-0.15	0.31	0.59
Hours-Day	0.62	-0.19	0.60	0.22
Hours-Other	-0.20	0.44	-0.66	0.06
Total Hours	1.14	0.91	-0.37	0.04
Hours Duty	0.05	0.31	-0.34	0.09
Sex	0.03	1.17	-1.45	1.05
Age	-1.54	-3.67*	3.26*	6.61*
Race	1.83	0.70	0.26	1.71
Marital Status	-0.32	-0.02	-0.18	0.07
Education	-0.60	-0.63	0.37	0.41
Number Depend. Excl. Spouse	0.33	-1.77	2.86	2.51
Spouse Civ. Earnings	0.92	-0.14	0.77	0.52
Total Family Income	-1.72	-0.86	-0.06	0.95
Civilian Job Offers	1.05	0.72	-0.21	0.56
Finding a Civilian Job	1.63	-0.27	1.33	2.21
Expected Civilian Earn.	0.27	-1.07	1.72	0.96
Use Skill on Civilian Job	0.26	1.19	-1.22	0.79

** P < 0.01

APPENDIX E

MEANS TESTS OF ALTERNATIVE JOB VARIABLES

Initial Obligor Group (I)

Variable	Subgroups: Leave vs Stay T Value	Non-Career vs Career T Value	Short Term vs Career T Value	Career vs Short Term vs Leaver F-value
Supervisors	-3.08*	-2.85*	1.02	5.57*
Having a Say	-3.03*	-2.67*	0.82	4.41
Retirement	-3.35*	-2.11	-0.24	5.55*
Medical Benefit	-4.17*	-2.26	-0.79	8.48*
Interesting	-4.38*	-3.43*	0.67	10.85*
Salary	-3.17*	-2.54	0.50	4.85*
Promotion	-3.88*	-4.91*	3.03*	11.11*
Training	-3.12*	-2.73*	0.87	5.07*
People	-2.05	-1.37	-0.03	3.16
Work Schedule	-2.79*	-2.45	0.71	3.84
Security	-2.85*	-1.49	-0.65	4.22
Equipment	-1.59	-0.54	-0.71	2.29
Location	-3.70*	-2.34	-0.14	6.62*

* $P < 0.01$

Non-Initial Obligor Group (II)

Variable	Subgroupings: Leave vs Stay T Value	Non-Career vs Career T Value	Short Term vs Career T Value	Career vs Short Term vs Leaver F-value
Supervisors	-3.34*	-3.07*	1.60	7.25*
Having a Say	-3.11*	-3.08*	1.64	6.08*
Retirement	-2.03	-2.24	1.39	3.05
Medical Benefit	-1.56	-1.75	1.10	1.81
Interesting	-3.75*	-4.55*	3.00*	13.20*
Salary	-1.34	-0.83	0.16	0.99
Promotion	-2.26	-1.79	0.71	2.87
Training	-3.08*	-3.79*	2.54	8.04*
People	-2.62*	-1.69	0.43	3.09
Work Schedule	-1.63	-1.23	0.47	2.03
Security	-1.00	0.04	-0.65	0.72
Equipment	-2.01	-2.28	1.40	3.06
Location	-2.45	-2.12	1.00	3.49

** $P < 0.01$

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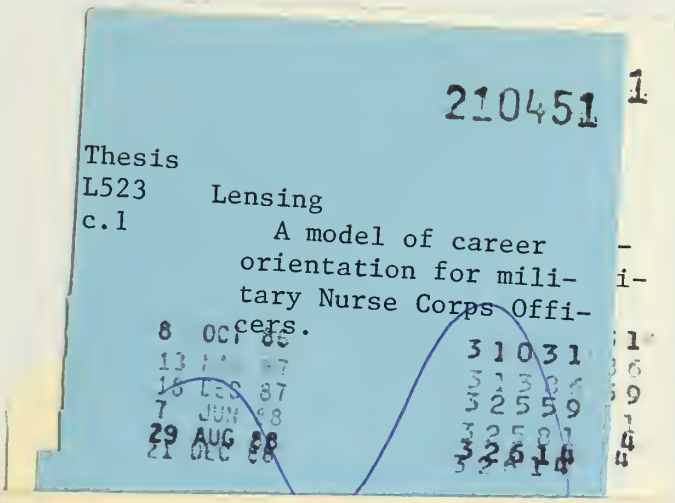
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